



zerum.co.uk

Environmental Statement Volume 1: Main Text

At [One Park Place, Manchester](#)

On behalf of [Benjamin Property Company Ltd](#)

October 2023

Contents

1.	Introduction	1
2.	The Site	7
3.	Alternatives and Design Evolution	9
4.	The Proposed Development.....	14
5.	Planning Policy	18
6.	Methodology.....	26
7.	Daylight and Sunlight	37
8.	Greenhouse Gas Emissions	52
9.	Built Heritage	114
10.	Socio-Economics.....	134
11.	Townscape and Visual Impact	165
12.	Wind Microclimate	198
13.	Summary of Impacts.....	220

Appendices (Volume 2)

Appendix 1.1 Scoping Report
Appendix 1.2 Scoping Opinion

Appendix 2.1 Site Location Plan

Appendix 4.1 Construction Management Plan

Appendix 6.1 Statement of Community Involvement
Appendix 6.2 Schedule of Cumulative Developments

Appendix 7.1 Drawings of the Existing and Proposed Situations
Appendix 7.2 Daylight and Sunlight Analysis Results for Surrounding Sensitive Receptors

Appendix 8.1 Greenhouse Gas Calculation Inputs

Appendix 9.1 Heritage Statement: Significance Appraisal & Impact Assessment

Appendix 11.1 ZTV and Designation Plan
Appendix 11.2 Viewpoints and Locations Plan
Appendix 11.3 Accurate Visual Representations Verified Views

Appendix 12.1 Detailed Wind Microclimate Methodology

1. INTRODUCTION

- 1.1 Regulation 3 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (hereafter referred to as the “EIA Regulations”) prohibits the grant of planning permission for EIA development unless an EIA has been carried out in respect of that development. EIA Regulation 4(1) defines EIA as a process which includes the preparation of an Environmental Statement. EIA Regulation 4(2) sets out the factors upon which the EIA must identify, describe and assess the direct and indirect significant effects of the Proposed Development.
- 1.2 This Environmental Statement (ES) has been prepared to accompany the application for planning permission that is being submitted by Zerum to Manchester City Council ('MCC'). Volume 1 of this Environmental Statement (ES) has been prepared by Zerum, with input from the technical and design team, on behalf of Benjamin Property Company Limited ('the applicant'), in support of a Proposed Development at 1 Park Place, Manchester ('the Site').
- 1.3 Benjamin Property Company Ltd are working in partnership with United Living to deliver residential-led development on the Site.

OVERVIEW OF THE PROPOSED SCHEME

- 1.4 The development is for a full planning application following development:

“Demolition of existing building and erection of a part 25 and part 15 storey residential building comprising 154 units with ground floor commercial units (Use Class E), associated residents amenity space, cycle parking, substation, servicing, and associated landscaping works”

LEGAL FRAMEWORK

- 1.5 The procedures for undertaking an EIA are set out within the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 ('EIA Regulations 2017'). The proposed development does not fall with an identified Schedule 1 development for which EIA would be compulsory, it has however been identified within Schedule 2, 10b as an 'urban development project' and falls under part (ii) as the development includes more than 150 dwellings.
- 1.6 The EIA process is objective and systematic in identifying, assessing, reporting, mitigating and monitoring significant environmental effects. This Environmental Statement ('ES') reports on the findings of the EIA.
- 1.7 In accordance with Regulation 18(3) of the EIA Regulations, this ES includes the minimum requirements:

EIA Regulations	Inclusion within the ES
(a) a description of the proposed development comprising information	The full description of development is provided at Chapter 5

on the site, design, size and other relevant features of the development	
(b) a description of the likely significant effects of the proposed development on the environment;	Descriptions of the likely significant effects of the Proposed Development on the environment is set out in the technical chapters 7 - 12
(c) a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;	Descriptions of mitigation measures to offset likely significant effects of the Proposed Development on the environment is set out in the technical chapters 7 - 12
(d) description of the reasonable alternatives studied by the developer, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment;	The reasonable alternatives have been considered in Chapter 3 'Design Evolution and Alternatives'
(e) a non-technical summary of the information referred to in sub-paragraphs (a) to (d)	A Non-Technical Summary (Volume 3) forms part of this ES
(f) any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.	The specific characteristics of the development are set out in Chapter 2 'The Site'

- 1.8 The ES will be produced in accordance with Schedule 4 of the EIA Regulations 2017, PPG and will follow best practice in the production of the ES.
- 1.9 In accordance with Regulation 18(4)a, an ES must be based on the most recent scoping opinion or direction issued (so far as the proposed development remains materially the same). Regulation 18(4)b requires the ES to include the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment. EIA Regulation 18(4)c requires the ES to take into account the results of any relevant UK environmental statement, with a view to avoiding duplication of assessment.
- 1.10 EIA Regulation 18(5)(a) states that in order to ensure the completeness and quality of the ES, the developer must ensure that the environmental statement is prepared by competent experts. The ES must be accompanied by a statement from the developer outlining the relevant expertise or qualifications of such experts. In this respect, this Chapter sets out the team of experienced consultants and the author and their experience is confirmed at the start of each Chapter.

- 1.11 Schedule 4 of the EIA Regulations provides a list of the information for inclusion in Environmental Statements.

Table 1.1: Requirements of Environmental Statements

EIA Regulations	Inclusion within the ES
A description of the location of the development	The description of the location of the development is included in Chapter 2
A description of the characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;	The description of the physical characteristics of development is included in Chapter 4
A description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used	This is included in Chapters 7-12
An estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases	Estimates are included within each technical chapter (7-12)
A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects	A description of the reasonable alternatives is provided in Chapter 3
A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution there of without implementation of the development as far as natural changes from the baseline scenario can be assessed	A description of the current baseline conditions and of the future baseline has been included in Chapters 7 - 12
A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development	A description of the likely significant effects of the development on the environment is provided within Chapters 7-12

A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment	The methodology used to identify and assess the significant effects on the environment is set out within Chapters 7-12
A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangement	The expected effects of the development are set out within Chapters 7-12
A non-technical summary of the information provided under paragraphs 1-8	A Non-Technical Summary has been provided as a standalone document (Volume 3)
A reference list detailing the sources used for the descriptions and assessments included in the ES	Reference lists have been provided at the end of each technical chapter

STRUCTURE OF THE ES

1.12 The ES for the Proposed Development comprises this main document (Volume 1) together with the accompanying Appendices (Volume 2) and a Non-Technical Summary. The ES reflects the Zerum Scoping Request Report (18th August 2023) at Appendix 1.1 and the Scoping Opinion issued by the Council on the 25th September 2023 at Appendix 1.2.

1.13 Volume 1 (this document) is structured as follows:

- Chapter 1: Introduction, prepared by Zerum
- Chapter 2: The Site, prepared by Zerum
- Chapter 3: Alternatives and Design Evolution, prepared by Zerum
- Chapter 4: The Proposed Development, prepared by Zerum
- Chapter 5: Planning Policy, prepared by Zerum
- Chapter 6: Methodology, prepared by Zerum
- Chapter 7: Daylight/Sunlight, prepared by GIA
- Chapter 8: Greenhouse Gas Emissions, prepared by Buro Happold
- Chapter 9: Built Heritage, prepared by Stephen Levrant Heritage Architecture
- Chapter 10: Townscape and Visual Impact Assessment, prepared by RBMP
- Chapter 11: Socio-Economics, prepared by Buro Happold
- Chapter 12: Wind Microclimate, prepared by GIA
- Chapter 13: Summary of Impacts, prepared by Zerum

CONSULTANT TEAM

- 1.14 The EIA Team is being led by Zerum, an experienced EIA co-ordinator, with input from other specialist technical consultants. The EIA Team comprises the following:

Table 1.2: EIA Team

Discipline	Consultant
Architect	Hodder + Partners
Landscape Design	Land Studio
EIA Coordinator Planning Consultant	Zerum
Daylight/Sunlight	GIA
Greenhouse Gas Emissions	Buro Happold
Heritage	SHLA
Socio-Economic	Buro Happold
Townscape and Visual Impacts	RBMP
Wind Microclimate	GIA

- 1.15 The Project Team comprises:

Table 1.3: Project Team

Discipline	Consultant
Architect	Hodder + Partners
Landscape Design	Land Studio
EIA Coordinator Planning	Zerum
Archaeology	Orion Heritage
Consultation	Cavendish Consulting
Daylight/Sunlight	GIA
Ecology	ERAP
Fire	Jensen Hughes
Greenhouse Gas Emissions	Buro Happold
Highways	SK Transport
Heritage	SHLA
Noise	Miller Goodall
Socio-Economic	Buro Happold

Townscape and Visual Impacts	RBMP
TV and Radio Reception	GTech
Wind Microclimate	GIA
Sustainability	Futureserv

EXPERTISE

- 1.16 The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 at 18(5) require that an ES is prepared by competent experts, and that the ES be accompanied by a statement outlining the relevant expertise or qualifications of such experts.
- 1.17 This EIA has been prepared and co-ordinated by Nikki Sills MA (Hons) MSc MRTPI (Divisional Director) and Kate Salter BA (Hons) MSc MRTPI (Senior Planner). Nikki and Kate are fully chartered members of the RTPI who have co-ordinated a number of EIAs over the past few years and are therefore competent at the production and co-ordination of EIAs.
- 1.18 As EIA coordinators we have prepared the framework, templates and introductory chapters of this ES. We also co-ordinated and prepared the introductory chapters of the Scoping Report.
- 1.19 The sub-consultant team who have prepared the subject chapters of this ES have been checked to ensure that they have the relevant qualifications and experience. Their chapters set out how they have complied with the relevant legislation and professional guidelines. The impacts and assessments within each chapter have been reviewed individually and jointly by Zerum.
- 1.20 We consider that this Statement demonstrates that Zerum has sufficient expertise to ensure the completeness and quality of the statement.

2. THE SITE

THE EXISTING SITE

- 2.1 The Site is one hectare and is located to the north of Manchester City Centre, within the area of Cheetham Hill and the City Centre Fringe. The site is previously developed and currently occupied by a single storey light industrial unit with a pitched roof and a flat-roofed single storey extension, with associated surface car parking and hardstanding to the rear. The building was most recently occupied by Amber Jewellery, a wholesaler, distributors & exporter of fashion jewellery and accessories.
- 2.2 The building is faced in white render and the window and door openings are shuttered. The northern and western elevations of the building are largely blank in character. The Site is unkempt and its frontage dominated by car parking. The building was constructed in the 1990s.
- 2.3 A Site Location Plan is provided at Appendix 2.1.
- 2.4 Cheetham Hill is historically a multi-faith area, and has been a base for Christian and Jewish communities. The Site and its immediate surroundings have been home to religious buildings since the 1840s. The Site has had a number of previous uses including a Synagogue that was destroyed during WW2 air raids, a hall and a clothing factory and works. The building was revivalist in style, and fused Venetian, Romanesque, Gothic and Moorish influences.

THE SURROUNDING AREA

- 2.5 The Site is bound to the north by Park Place, to the east by Cheetham Hill Road, to the south by 21 Cheetham Hill Road, currently a furniture shop, and to the west by 3a Park Place.
- 2.6 The Site's surroundings are characterised by retail premises, residential use, and offices. In general, the wider surrounding area is occupied by fashion and furniture manufacturing and retail premises, surface car parks and offices. The area is noted as being dominated by warehousing. Generally, the quality of the public realm and the building stock in the area is low.
- 2.7 HMP Manchester lies c. 330 m to the east of the Site. To the south of the Site c. 150m is the boundary of the City Centre.
- 2.8 The area around the Site has a range of land uses. To the north of the site is Park Place, and the building at 25-31 Cheetham Hill Road is a bank. A recently completed residential building known as The Hallmark lies on the opposite side of Cheetham Hill Road, which ranges from 10 to 15 storeys high. To the south-east of the Site is a hotel. To the south, the adjacent property is in retail use as a furniture shop. A law chamber is located in the Grade II Listed Former Synagogue also to the south. To the south-west of the Site is a large surface car park accessed from Skip Place. To the west of the site is a three-storey brick building understood to be in office use.

- 2.9 The area to the east on the other side of Cheetham Hill Road, known as the Green Quarter, is a primarily residential area with buildings of 8-16 storeys tall.
- 2.10 The Site is within easy walking distance of the City Centre where there are many public transport connections. Both Victoria Station and Shudehill Interchange are approximately 10 minutes walking distance from the Site, providing train, tram and bus links. From Victoria Station, the Metrolink runs to Rochdale, East Didsbury, Bury and Piccadilly.
- 2.11 Bus stops are also located less than 100m to the south of the site on Cheetham Hill Road. The Site is located 200m to the north of the junction with the A6042 Ring Road, a main arterial road providing road access northwards away from the City Centre and also direct access on to the outer ring road of Manchester City Centre.
- 2.12 The shops, services and leisure facilities in Manchester City Centre are located less than a 10-minute walk to the south. Local shops and services are also located along Cheetham Hill.

DESIGNATIONS

- 2.13 There are no ecology or environmental designations covering the Site and it predominantly consists of hardstanding. There are no trees on the Site or on adjacent sites that could be affected by the development.
- 2.14 Adjacent to the Site is the Greater Manchester Air Quality Management Area (AQMA) that covers Cheetham Hill Road. There is potential for the exposure of future occupants to poor air quality and for emissions generated by the site during operation to increase pollution levels in this sensitive area.
- 2.15 The Site is located in Flood Risk Zone 1 and the Manchester, Salford and Trafford Critical Drainage Area.
- 2.16 There are no Listed buildings on the Site and it is not located in a Conservation Area. The former Synagogue to the south of the site is a Grade II Listed Building. It was constructed in the 1840s as a Methodist chapel, in sandstone, and converted to a synagogue later. The building is sandstone ashlar in a classical style over two storeys. There are other non-designated heritage assets in the vicinity of the site, including at 2 Park Place, part of the former Women and Children's Hospital, built in the 1890s in red brick. The red brick building adjacent to the Site at the south, at 21 Cheetham Hill Road, was also used as the Women and Children's hospital.

3. ALTERNATIVES AND DESIGN EVOLUTION

- 3.1 Part of the EIA process involves considering alternatives to the proposed development to assist in identifying different approaches which could reduce or minimise environmental effects. The EIA Regulations 2017 Schedule 4 Part 2 sets out that environmental statements should include, “A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.” The main alternatives considered are outlined below.

DO NOTHING ALTERNATIVE

- 3.2 Best practice guidance in carrying out an EIA suggests that it is good practice to consider the evolution of a site in the absence of the development proposed (i.e. a ‘no development’ scenario).
- 3.3 If the scheme which is the subject of this ES did not proceed, then the previous use of the Site as a vacant light industrial unit would continue. Part of the Site would continue to be used as surface car parking. The ‘do nothing’ alternative therefore assumes the continuation of the current use of the Site as a vacant former light industrial use with surface car parking.
- 3.4 However, in light of the benefits that can be delivered by the proposal including (but not limited to) the provision of new homes, new commercial floorspace and the contribution the Site can make to the vision and objectives of the Great Ducie Street Strategic Regeneration Framework, it is realistic to assume for the purposes of the ES that a ‘do nothing’ scenario is highly unlikely.
- 3.5 As such, no further consideration has been given to the ‘do nothing’ scenario beyond this chapter.
- 3.6 The effects that would derive from this ‘do nothing’ scenario are set out below.

Table 3.1: Impact of the ‘Do Nothing’ scenario on topics

Chapter/Topic	Summary Review of the Do Nothing Alternative
Chapter 6: Daylight/Sunlight	If the Proposed Development was not delivered, the existing daylight and sunlight baseline conditions in the surrounding sensitive receptors would not be expected to change.
Chapter 7: Greenhouse Gas Emissions	The greenhouse gas emissions associated with the demolition, construction and operational phases would not be released.
Chapter 8: Built Heritage	If the Proposed Development did not take place the setting of some of the existing designated and non-designated heritage assets

	would change as a result of the committed developments in the vicinity of the site.
Chapter 10: Socio-Economic	The socio-economic benefits of the Proposed Development would not be delivered.
Chapter 11: Townscape and Visual Impacts	If the Proposed Development was not delivered, the townscape conditions would change as a result of the committed developments in the vicinity of the site.
Chapter 12: Wind Microclimate	If the Proposed Development was not delivered, the wind microclimate would be expected to remain the same.

CONSIDERATION OF ALTERNATIVE LOCATIONS

- 3.7 It is noted as a mixed-use building, with ground floor commercial units and residential to the west, and typical upper floors being in residential use.
- 1.21 The Site is identified as being suitable for 20-29 storeys by the Indicative Heights Drawing (Appendix B) of the Great Ducie Street Strategic Regeneration Framework (November 2018).
- 3.8 On this basis, a detailed assessment of the need for the Site and consideration of alternative sites is not considered necessary for the scope of this EIA.

ALTERNATIVE USES

- 3.9 The Site is located within the boundary of the Great Ducie Street Strategic Regeneration Framework ('SRF') (November 2018). The SRF was endorsed by MCC in 2019 to guide the regeneration and revitalisation of the Great Ducie Street area. The SRF envisages the creation of a "mixed use neighbourhood with a strong sense of place and community".
- 3.10 The key objectives of the SRG are as follows:
- **An Enhanced Economic Role for the Area:** Higher density mixed use development set within a high-quality environment is envisaged for the area. This form of development should significantly increase the quantum and quality of employment floorspace and jobs within this area via replacement of the existing low density, low quality employment uses.
 - **Providing High Quality, Sustainable New Homes, Contributing to a Balanced Housing Supply:** A key objective is to diversify the land use within the GDS - SRF area as a means of driving regeneration and delivering high quality sustainable new housing. New residential development must demonstrate that the scheme will deliver a finished project of the highest quality.
 - **Building Inclusive Communities:** Delivering residential amenity facilities will be encouraged within residential developments.

- **Sustainability and Resilience:** All development must include measures to reduce carbon emissions and include sustainable features.
 - **Density and Place-Making:** Increasing the density of development is crucial to provide sustainable growth, long term economic competitiveness, vibrancy and the opportunity to incorporate multiple land uses. The appropriate density of urban development should therefore balance economic viability, urban density and policy objectives.
 - **Street Hierarchy:** Priority should be given to pedestrians over vehicles. This can be achieved through ensuring that vehicles only circulate where needed and that pedestrian can permeate to as many parts as possible.
 - **Residential Amenity:** The combination of employment and residential uses will need to be carefully designed and managed. New development should create an environment where the amenity of residents and the environment within the Site with regard to privacy, microclimate, noise, refuse management, safety and vehicular movement.
- 3.11 The SRF notes that currently the built environment and public realm in the area does not lend itself to major new employment investment in its own right, but there is evidence of developer interest in the area, based on mixed-use approach combining residential and employment and associated supporting uses.
- 3.12 The SRF Proposed Ground Floor and Typical Floor Masterplans (p10-11) identify the Site as accommodating residential development with ground floor commercial uses, with typical upper floors being in residential use.
- 3.13 The SRF explains that with regard to implementation, the creation of residential uses in the area is necessary to meet demand, deliver environmental and infrastructure improvements, deliver a mixed-use neighbourhood, and deliver a quality neighbourhood in terms of built environment and place-making.
- 3.14 The ground floor commercial uses are noted as being important to provide active frontages to the street scene. The SRF states that the masterplan seeks to improve the quality and quantity of commercial use in this area, and provide commercial space which will be attractive to existing businesses whilst suiting a range of new users. The masterplan also introduces new residential uses and higher density development to facilitate the improvements in commercial floorspace.
- 3.15 For these reasons, alternative uses were discounted.

DESIGN EVOLUTION

- 3.16 A wide range of specialist consultants and other stakeholders have provided input into the evolving scheme which has informed the design process and served to reduce environmental effects, improve the design of the Proposed Development, and to ensure that the development is viable and responds to the client's brief.
- 3.17 The key constraints, principles and rationale for the design of the Proposed Development, and its evolution, is described in detail within the Design and Access Statement submitted as a standalone document.

- 3.18 The early proposals for the Site, presented to the Council by a different architect, considered two development options. Both options provided commercial floorspace over part of the ground floor facing Park Place and Cheetham Hill Road, and over part of the first and second floor; religious floorspace over ground and first floor; and resident lounge and gym over the second floor. Amenity space was provided in the form of a rooftop garden only, and a single stair core was proposed.
- 3.19 The housing mix and massing differed in the options presented. In the first option, predominantly two-bedroom apartments were proposed (91%) with a small number of one-bedroom apartments over the first two residential floors, and at penthouse level, three-bedroom apartments (2%) on the 19th floor.
- 3.20 The second option proposed a different housing mix, with a larger proportion of one-bedroom apartments (29%) compared to two-bedroom apartments (68%) and a small number of three bedrooms (3%).
- 3.21 The height of this early proposal was 21 storeys including the ground floor. The massing of the building was significantly greater, comprising a rectangular floorplate with a large built form to plot ratio. This prohibited any external public space at the street level and would have also had a greater impact on surrounding streets during construction.
- 3.22 A different design team, including the architect Hodder + Partners were then appointed.
- 3.23 A key consideration for the design of the Site has been the requirement to take into account constraints including the residential redevelopment potential of the site to the south; the relatively constrained size of the Site; and protection of Listed and noteworthy buildings. Following consultation and investigative work, these constraints have been accommodated.
- 3.24 The following key design concepts have been explored, developed and refined throughout the design evolution:
- **Height:** Appendix B of the SRF confirms that the Site has been identified as having an appropriate height of between 20 to 29 storeys overall. The Proposed Development comprises part 15 and 25 storey development.
 - **Relationship to site to the south:** The proximity of the Proposed Development to the site to the south currently occupied by a non-designated heritage asset, part of the former Women and Children's Hospital, and currently used as a furniture shop, is considered important in order to avoid sterilising its potential future development potential. This site is identified in the SRF for retention.

Whilst the adjacent building is identified as retained within the SRF, the Applicant was asked during the pre-application discussions with MCC to consider 'what if' the adjacent site came forward for redevelopment. As the site sits between the application site and the Grade 2 Listed former Synagogue, following input from the architect and heritage consultant a reasonable/calculated assumption was made that the height and massing of any proposed development would form a gradual step between the low-level heritage asset, and the 25 storey proposal. It was therefore concluded that the

appropriate transition height for this future development site would be 10 storeys. During the design evolution, select windows on the south facing façade of the Proposed Development were removed to avoid overlooking and consequently privacy issues. The only glazing that faces onto this site is those of secondary bedrooms.

- **Amenity space:** A public space is proposed in the south-western corner of the Site. This will serve the Proposed Development as well as other residential developments in the area. 192sq.m of resident amenity space is proposed on the mezzanine floor.
- **Design quality:** The aim was for the creation of a landmark building, with high quality design and materials, to become a clear marker on Cheetham Hill Road and within the Great Ducie Street neighbourhood. Sensitive massing and elevation treatments create a slender and elegant addition to the skyline.
- **Active frontages:** The SRF notes that the current building on the Site lacks an active frontage to engage with the surrounding street and public realm. The Proposed Development incorporates 180.5sq.m of commercial floorspace on the ground floor over two units, with entrances from Park Street and Cheetham Hill Road.
- **Massing:** The key design drivers for massing are retaining views, site constraints and contextual scale relationships. To break the massing up, a stepped approach has been used to with the taller element facing onto Cheetham Hill Road and the high density Green Quarter over the road, and a lower element stepped down to the west to respond to the adjacent Listed buildings, and to break down the mass along Park Place.
- **Character of the area:** There is no consistent architectural character in the area, yet the proposal uses elements from the nearby heritage assets and responds to the scale of these. A colonnade has been used at ground and mezzanine level which aligns with the cornice across the building to the south. Cornice detail has also been replicated in a contemporary manner as a narrow protruding string course.

CONCLUSION

- 3.25 The Proposed Development as outlined in the next chapter has been designed to respond to a range of comments by stakeholders, planning policies and guidance, local site characteristics and the result of public consultation.

4. THE PROPOSED DEVELOPMENT

INTRODUCTION

4.1 This ES relates to a full planning application. It is proposed that full planning permission is sought for the demolition of the existing buildings at the site and a mixed-use residential-led development of up to 25 storeys in height is proposed, with commercial units at the ground and mezzanine floor level. Amenity areas are provided on the mezzanine floor, and a resident roof garden is proposed on the 15th floor. The current proposals are aiming to deliver 154 residential units in total.

4.2 The description of development is:

“Demolition of the existing building and erection of a part 25 and part 15 storey residential tower comprising 154 units with ground floor commercial units (Use Class E), associated resident amenity space and cycle parking, substation, servicing, and associated landscaping works”.

4.3 Detailed development plans and a Design and Access Statement submitted in support of the detailed planning application will establish detailed information about the design of the proposed development.

CONSTRUCTION METHODOLOGY

4.4 A number of assumptions have been made in terms of the demolition and construction processes and activities to be undertaken as part of the Proposed Development. The existing building on site will be demolished.

4.5 The Proposed Development will be completed in three stages; demolition, enabling works and above ground works.

4.6 A Construction Environmental Management Plan (CEMP) will be produced to control potential impacts during the construction phase. This can be secured through a suitably worded planning condition. The mitigation measures outlined in the Air Quality Assessment have been included within the CEMP submitted in support of the Application, to mitigate fugitive dust emissions during construction. These are based on the advice provided within IAQM guidance, 'Guidance on the Assessment of Dust from Demolition and Construction V1.1'.

4.7 Further details of the methods to address construction issues, as well as roles and responsibilities, is provided within the CEMP submitted with the application (Appendix 4.1).

Programme

4.8 For the purpose of this EIA, the construction phase of the Proposed Development will take approximately 110 weeks or 25 months. On the assumption that the grant of full planning permission will be received in Q1 2024, works commencing in Q3 2024 and scheme completion at the end of Q3 2026.

OPERATIONAL DEVELOPMENT

- 4.9 The Proposed Development would deliver 154 no. residential apartments, as demonstrated in the Design and Access Statement and plans.

Use and Amount

- 4.10 The Proposed Development is residential-led and incorporates 154 no. residential apartments. The proposed housing mix is confirmed by Table 4.1 below.

Table 4.1: Housing Mix

Unit type	Frequency	Percentage (%)
1 bed	46	30
2 bed	108	70

- 4.11 Over the ground floor, 180.5sq.m of commercial floorspace (Use Class E) is proposed, which would be split over two units at ground floor.
- 4.12 The remaining ground floor and mezzanine accommodation comprises a reception area and post room at the main entrance from Cheetham Hill Road, resident facilities such as a post room and cycle store, and various back of house functions including a substation, switch room, generator, sprinkler tank and potable tank room. The refuse store is located on the ground floor for direct access to the servicing access at the west.

Layout

- 4.13 The siting of the proposed development has been influenced by a number of constraints and opportunities, this includes the size of the site and adjacent building but also the opportunity to create a new landmark building which will contribute to the ongoing regeneration of the area.
- 4.14 The Proposed Development will provide a public space to the south-west and the ground floor will accommodate commercial uses on the north and eastern elevations to create active frontages on Cheetham Hill Road and Park Place.
- 4.15 The ground floor and will accommodate the ancillary spaces such as a bin store, cycle storage, switch room, substation and communications room. This level will also include the reception area, a post room and 180.5sq.m of commercial space with active frontages along the northern and eastern elevations. Above the ground floor sits the mezzanine level (level 1) that has been designed to accommodate the remaining plant rooms, a storage room as well as further 191sq.m of amenity space.
- 4.16 Residential accommodation is then provided from the second floor (Level 2) with eight apartments on each floor up to level 15. From level 16, there will be five apartments on each floor up to level 25. This is due to the building being part 15 and part 25 storey high. The roof level of the lower element will include a landscaped roof terrace.

Scale and Massing

- 4.17 The proposed building occupies roughly the same footprint as the existing building at the site. The proposed development will be positioned on the corner of Park Place and Cheetham Hill Road.
- 4.18 The proposed building will part 15 and part 25 storey high. Due to the proximity of the proposed development to the adjacent plot raised, potential issues of overlooking between the south facing apartments and on the adjacent site have been carefully considered.
- 4.19 The key design drivers for massing are retaining views, site constraints and contextual scale relationships.
- 4.20 The massing of the Proposed Development is broadly 'L' shaped up to the 15th floor, to accommodate a semi-private courtyard for residents and public users on street level, accessible via the service access from Park Place. This is also to accommodate a crane to ensure roads around the site are not disrupted. The Proposed Development is part 15 and 25 storeys high, with the tallest section of the building located at the east of the site fronting Cheetham Hill Road and the high density Green Quarter over the road. The building form has been pushed back from the adjacent historic building.

Landscaping

- 4.21 Public open space in the form of a semi-private courtyard for residents and public users is located on street level, accessible via the service access from Park Place and the southern thoroughfare.
- 4.22 A private terrace is proposed on the 15th floor, buffered by the taller section of the building, furthest away from Cheetham Hill.
- 4.23 A semi-private courtyard of c. 125sq.m and a landscaped residential podium roof terrace are proposed on Level 15. The semi-private courtyard comprises 16sq.m of raised planting, 3 no. trees, seating areas, lighting and hard surfacing. The roof garden comprises 60sq.m of raised planting, 6 no. trees/large shrubs, a resident communal dining and workspace, seating areas, lighting and hard surfacing.

Highway Works

- 4.24 Works are proposed to the external footway and public highway, including modifications to the existing TRO on the site. It is proposed to add tactile paving to an existing section of dropped kerb on the servicing access point off Park Place, and on the crossing at the junction of Park Place with Cheetham Hill Road. The footways surrounding the site are proposed to be resurfaced. The dropped kerb at the south-east of the site is proposed to be reinstated to a full height kerb, and the two redundant access points on the northern boundary of the site are proposed to be reinstated to a continuous footway. Three on-road marked bays are proposed comprising one standard space, one disabled space and one Car Club space.

Decommissioning

- 4.25 The development has been designed to be operational in excess of 100 years and thereafter will comprise development land in perpetuity. The assessment does not address decommissioning.

5. PLANNING POLICY

- 5.1 This Chapter of the Environmental Statement assesses the planning policy background against which the Proposed Development is to be assessed. The scope of this chapter is to identify the relationship between the Proposed Development and the relevant national and local planning policy.
- 5.2 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that when determining a planning application, the decision maker must make their determination in accordance with the development plan unless material considerations indicate otherwise.

LOCAL DEVELOPMENT PLAN

- 5.3 As outlined earlier, Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that planning applications be determined in accordance with the statutory development plan, unless material considerations indicate otherwise. For development management decisions, the development plan for Manchester currently comprises the Core Strategy and saved policies of the Manchester Unitary Development Plan.

Core Strategy 2012-2027 (11th July 2012)

- 5.4 The following Core Strategy policies are considered relevant to this application:
- Policy SP1 Spatial Principles
 - Policy EC2 Existing Employment Space
 - Policy EC3 Regional Centre
 - Policy EC4 North Manchester
 - Policy CC3 Housing
 - Policy CC5 Transport
 - Policy CC6 City Centre High Density Development
 - Policy CC8 Change and Renewal
 - Policy CC9 Design and Heritage
 - Policy CC10 A Place for Everyone
 - Policy H1 Overall Housing Provision
 - Policy H8 Affordable Housing
 - Policy T1 Sustainable Transport
 - Policy T2 Accessible Areas of Opportunity and Need
 - Policy EN1 Design Principles and Strategic Character Areas
 - Policy EN2 Tall Buildings
 - Policy EN3 Heritage

- Policy EN4 Reducing CO2 Emissions by Enabling Low and Zero Carbon Development
- Policy EN5 Strategic Areas for Low and Zero Carbon Decentralised Energy Infrastructure
- Policy EN6 Target Framework for CO2 Reductions from Low or Zero Carbon Energy Supplies
- Policy EN8 Adaption to Climate Change
- Policy EN14 Flood Risk
- Policy EN15 Biodiversity and Geological Conservation
- Policy EN16 Air Quality
- Policy EN17 Water Quality
- Policy EN19 Waste
- Policy DM1 Development Management

Manchester Unitary Development Plan (1995)

5.5 The Manchester Unitary Development Plan (UDP) was adopted in July 1995 and some policies remain extant, notwithstanding the adoption of the Manchester Core Strategy and the NPPF. The saved policies most relevant to the Proposed Development are:

- Policy DC7.1 New Housing Development which sets out that the Council will negotiate with developers to ensure that new housing is accessible at ground floor level to disabled people, including those who use wheelchairs, wherever this is practicable. All new developments containing family homes will be expected to be designed so as to be safe areas within which children can play and, where appropriate, the Council will also expect play facilities to be provided.
- Policy DC26 Development and Noise which seeks to use the development control process to reduce the impact of noise on people living and working in, or visiting, the City. In giving effect to this intention, the Council will consider both: a. the effect of new development proposals which are likely to be generators of noise; and b. the implications of new development being exposed to existing noise sources which are effectively outside planning control. New noise sensitive developments (including large-scale changes of use of existing land or buildings), such as housing, schools, hospitals or similar activities, will be permitted subject to their not being in locations which would expose them to high noise levels from existing uses or operations, unless the effects of the noise can realistically be reduced. In giving effect to this policy, the Council will take account both of noise exposure at the time of receiving a planning application and of any increase that may reasonably be expected in the foreseeable future.

OTHER MATERIAL CONSIDERATIONS

NATIONAL PLANNING POLICY

- 5.6 The latest version of the National Planning Policy Framework (NPPF) was published in September 2023 and provides a framework within which locally prepared plans for housing and other development can be produced. It is a material consideration in planning decisions.
- 5.7 The NPPF has a clear presumption in favour of sustainable development at its heart (para 11). Sustainable development means that the planning system pursues economic, social and environmental objectives (para 8), although they are not criteria against which every decision can or should be judged (para 9).
- 5.8 Section 4 of the NPPF relates to 'Decision Making'. Paragraph 38 states that Local planning authorities should approach decisions on proposed development in a positive and creative way, with decision-makers at every level required to seek to approve applications for sustainable development where possible. They should use the full range of planning tools available, including brownfield registers and permission in principle, and work proactively with applicants to secure developments that will improve the economic, social and environmental conditions of the area.
- 5.9 Section 5 of the NPPF focuses on delivering a sufficient supply of housing. Within this section it is set out how Local Planning Authorities should plan to implement planning policies and how these should be produced in order to meet needs in relation to type, size and tenure of housing (Paragraph 62). In summary, it is the government's objective to significantly boost the supply of homes through utilisation of a sufficient variety of land types which can come forward to meet the needs of various groups with specific needs as outlined in Paragraph 60.
- 5.10 Section 8 of the promotes healthy and safe communities. As part of this paragraph 92 states that planning decisions should aim to achieve healthy, inclusive and safe places which: promote social interaction through design features including the creation of active frontages; are safe and accessible, so that crime, disorder and fear of crime don't undermine quality of life or community cohesion; and enable and support healthy lifestyles, especially where this would address identified local health and well-being needs, such as through the provision of accessible green space, shops and layouts that encourage walking and cycling.
- 5.11 Section 9 of the NPPF relates to the promotion of sustainable transport. Paragraph 105 highlights that significant development should be focussed on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This will support reductions in emissions and reduce congestion. The sites will make best use of existing sustainable transport modes and make use of the easy reach of many services and facilities.
- 5.12 Paragraph 111 states that, 'Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe'.

- 5.13 Development should prioritise pedestrian and cycle movements; facilitate access to high quality public transport; address the needs of those with disabilities and reduced mobility; create places that are safe, secure and attractive with minimal scope for conflicts between various road users; allow for efficient delivery of goods and emergency access; and be designed to enable charging of plug-in and other ultralow emission vehicles (Paragraph 112). Development generating significant movement should provide a travel plan (Paragraph 113).
- 5.14 Section 11 of the NPPF related to 'Making Effective Use of Land'. Planning decisions should promote the effective use of land by making as much use as possible of previously developed land (Paragraph 119).
- 5.15 Paragraph 124 states that planning policies and decisions should support development that makes efficient use of land, taking into account: the identified need for different types of housing and other forms of development, and the availability of land suitable for accommodating it; local market conditions and viability; the availability and capacity of infrastructure and services; the desirability of maintaining an area's prevailing character and setting, or of promoting regeneration and change; and the importance of securing well-designed, attractive and healthy places.
- 5.16 Section 12 of the NPPF focuses on achieving well designed places. Paragraph 126 sets out that the creation of high quality, beautiful and sustainable buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities.
- 5.17 Paragraph 130 sets out that planning decisions should ensure that development:
- Will function well and add to the overall quality of the area.
 - Are visually attractive as a result of good architecture, layout and appropriate and effective landscaping.
 - Are sympathetic to local character and history, including the surrounding built environment and landscape setting, whilst not preventing or discouraging appropriate innovation or change.
 - Establish or maintain a strong sense of place.
 - Optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development and support local facilities and transport networks.
 - Create places that are safe, inclusive and accessible and which promote health and well-being.
- 5.18 Design quality should be considered throughout the evolution and assessment of individual proposals. Early discussion between applicants, the local planning authority and local community about the design and style of emerging schemes is important for clarifying expectations and reconciling local and commercial interests (Para 132).

- 5.19 Section 14 of the NPPF seeks to meet the challenges of climate change, flooding and coastal change. New development should avoid increasing vulnerability to the range of impacts arising from climate change. It should also be planned in ways which can help reduce greenhouse gas emissions, such as through location, orientation and design as discussed in paragraph 154.
- 5.20 Section 15 looks at conserving and enhancing the natural environment. Planning decisions should contribute to and enhance the natural and local environment by avoiding unacceptable levels of soil, air, water or noise pollution. Additionally, proposals should seek to remediate and mitigate despoiled, degraded, derelict, contaminated and unstable land and provide net gains for biodiversity (Paragraph 174).

Great Ducie Street Strategic Regeneration Framework (November 2018)

- 5.21 The Great Ducie Street Strategic Regeneration Framework ('SRF') was endorsed by MCC in 2019 to guide the regeneration and revitalisation of the Great Ducie Street area.
- 5.22 The SRF sets out the key vision for the area as "the creation of a mixed use neighbourhood with a strong sense of place and community", as well as a number of key objectives:
- **An Enhanced Economic Role for the Area:** Higher density mixed use development set within a high-quality environment is envisaged for the area. This form of development should significantly increase the quantum and quality of employment floorspace and jobs within this area via replacement of the existing low density, low quality employment uses.
 - **Providing High Quality, Sustainable New Homes, Contributing to a Balanced Housing Supply:** A key objective is to diversify the land use within the GDS - SRF area as a means of driving regeneration and delivering high quality sustainable new housing. New residential development must demonstrate that the scheme will deliver a finished project of the highest quality.
 - **Building Inclusive Communities:** Delivering residential amenity facilities will be encouraged within residential developments.
 - **Sustainability and Resilience:** All development must include measures to reduce carbon emissions and include sustainable features.
 - **Density and Place-Making:** Increasing the density of development is crucial to provide sustainable growth, long term economic competitiveness, vibrancy and the opportunity to incorporate multiple land uses. The appropriate density of urban development should therefore balance economic viability, urban density and policy objectives.
 - **Street Hierarchy:** Priority should be given to pedestrians over vehicles. This can be achieved through ensuring that vehicles only circulate where needed and that pedestrian can permeate to as many parts as possible.
 - **Residential Amenity:** The combination of employment and residential uses will need to be carefully designed and managed. New development should

create an environment where the amenity of residents and the environment within the Site with regard to privacy, microclimate, noise, refuse management, safety and vehicular movement.

- 5.23 The SRF provides guidance on acceptable land uses for the redevelopment of the area in order to meet the key vision. The SRF Proposed Ground Floor and Typical Floor Masterplans (p10-11) identify the Site as accommodating residential development with ground floor commercial uses.
- 5.24 The Site is identified as suitable for 20-29 storeys by the Indicative Height Drawing at Appendix B of the SRF.
- 5.25 The Site is located in the Park Place character area. This area is noted as a mixed-use area where residential and commercial uses will be supported. These areas will act to graduate between existing commercial uses further north and more residential uses to the south.
- 5.26 The SRF sets out existing constraints and opportunities for the character area. The noteworthy buildings present within the character area should be retained and re-used for commercial purposes, if possible. The Proposed Development should respect Listed Buildings within the character area.
- 5.27 Development should facilitate opportunities for improved public realm and the creation of new pedestrian routes that better connect the character area to the rest of the SRF area. Specifically, the SRF aims to improve pedestrian routes through the character area and include a small public square at the head of Park Place, as a key node on the new pedestrian route from the River Irwell to the Irk.
- 1.22 The Park Place Masterplan (p80) provides further guidance on the opportunity for the redevelopment of the Site. It identifies a vehicular route running north to south at the west of the Site, and a vehicular route using Park Place. The whole of the plot is not developed on the masterplan. Active frontages are identified at the corner of Park Place and along Cheetham Hill Road.

Guide to Development in Manchester Supplementary Planning Document (2007) and Technical Guidance (2015)

- 5.28 The Guide to Development in Manchester - Supplementary Planning Document and Planning Guidance (SPD) was originally adopted on 11 April 2007. The document reflects and provides guidance on the importance of creating attractive, well-designed, well-maintained neighbourhoods. It includes a set of reasoned principles which will guide developers, designers and residents to the sort of development which is anticipated in Manchester.
- 5.29 In addition, technical guidance for developers was published in December 2015. It is composed of two documents, GD03 Environmental Protection and GD05 Planning and Noise.

Manchester Residential Quality Guidance (2017)

- 5.30 The purpose of the document is to outline the consideration, qualities and opportunities that will help to deliver high quality residential development as part of successful and sustainable neighbourhoods across Manchester. Above all the guidance seeks to ensure that Manchester can become a City of high quality residential neighbourhood and a place for everyone to live. The document outlines nine components that combine to deliver high quality residential development, and through safe, inviting neighbourhoods where people want to live.

- Make it Manchester;
- Make it bring people together;
- Make it animate street and spaces;
- Make it easy to get around;
- Make it work with the landscape;
- Make it practical;
- Make it future proof;
- Make it a home; and
- Make it happen.

EMERGING PLANNING POLICY

Places for Everyone Joint Development Plan Document

- 5.31 The Places for Everyone Joint Development Plan Document ('DPD') plan is the result of a process that began as the Greater Manchester Spatial Framework (GMSF) in 2014. After the withdrawal of Stockport Council from the GMSF the nine districts (Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan) decided to continue to produce a joint plan.
- 5.32 Places for Everyone is therefore a joint development plan of nine Greater Manchester districts, that builds upon the work already undertaken as part of the GMSF and sets out the approach to housing and employment land across Greater Manchester for the next 20 years. The plan also supports the delivery of transport and utility infrastructure, defines a new Green Belt boundary for these areas, and protects important environmental assets.
- 5.33 The Plan was submitted to the Government on 14 February 2022 and examination hearings were held between 1 November 2022 and 5 July 2023 by Inspectors appointed by the Secretary of State.
- 5.34 On 11 August 2023, Inspectors appointed by the Secretary of State (Levelling Up, Housing and Communities) confirmed that the Places for Everyone plan is ready to move to the next stage of the process. They have recommended that the nine authorities consult on a set of modifications to clarify the wording of the policies

however, the vision, objectives and Spatial Strategy for the Places for Everyone Joint Development Plan of nine Greater Manchester districts remain unchanged.

- 5.35 The GMCA published the Main Modifications to the Plan on 8 August 2023. Further details about the Main Modifications consultation including dates are yet to be announced.
- 5.36 Paragraph 48 of the NPPF states that local planning authorities may give weight to relevant policies in emerging plans according to: the stages of preparation; the extent of unresolved objections; and the degree of consistency of the relevant policies in the emerging plan to this Framework. Whilst the Places for Everyone Joint Development Plan is yet to be adopted, given its advanced stage of preparation, it is considered to carry some weight in the determination of planning applications.
- 5.37 The key policies relevant to the development proposals include:
- Policy SP1 Spatial Principles
 - Policy JP-Strat 2 City Centre
 - Policy JP-S1 Sustainable Development
 - Policy JP-S2 Carbon Emissions
 - Policy JP-S 4 Resilience
 - Policy JP-5 5 Flood Risk and The Water Environment
 - Policy JP-S 6 Clean Air
 - Policy JP-S7 Resource Efficiency
 - Policy JP-H1 Scale, Distribution and Phasing of New Housing Development
 - Policy JP-H3 Type, Size and Design of New Housing
 - Policy JP-H4 Density of New Housing
 - Policy JP-P1 Sustainable Places
 - Policy JP-C 1 World Class Connectivity

6. METHODOLOGY

- 6.1 The ES will be produced in accordance with Schedule 4 of the EIA Regulations 2017, PPG and will follow best practice in the production of the ES.

SCREENING

- 6.2 The Proposed Development falls within Category 10(b) of Schedule 2 to the EIA Regulations as an Urban Development project that includes more than 150 dwellings. The Proposed Development is therefore Schedule 2 development for the purposes of the EIA Regulations. MCC confirmed that the Proposed Development would constitute EIA development and there would be little merit in a Screening Opinion request. Therefore a Screening request was not submitted by the applicant, and the Proposed Development automatically constitutes EIA Development by reason of submission of this ES as part of the planning application.

SCOPING

- 6.3 In line with the EIA Regulations, a Scoping Opinion Request was submitted to the Council on the 18th August 2023 (Appendix 1.1). This included a Scoping Report which outlined the scope, content and methodology of the proposed assessment. The Scoping Report concluded that the following topics associated with the Proposed Development should be considered within the ES:
- Daylight/Sunlight
 - Greenhouse Gas Emissions
 - Built Heritage
 - Socio-Economic
 - Townscape and Visual Impacts
 - Wind Microclimate
- 6.4 A Scoping Opinion was received on the 25th September 2023 and is contained at Appendix 1.2.
- 6.5 The description of development has changed slightly than was referenced in the Scoping Report, which referenced a part 14 and 24-storey development. So far as the Proposed Development remains materially the same as the Proposed Development which was subject to that opinion or direction, this is acceptable per the Regulations.
- 6.6 In line with EIA Regulation 18(4(a)) this ES is based upon the Scoping Opinion.
- 6.7 The Scoping Opinion confirmed that the aforementioned topics should be scoped in, and that the following topics are scoped out:

- Air Quality
- Archaeology
- Ecology
- Flood Risk and Drainage
- Ground conditions
- Highways
- Human Health
- Noise and Vibration
- Telecommunications
- Lighting
- Risk of major accidents and disasters
- Sustainability
- Utilities; and
- Waste.

PUBLIC CONSULTATION

- 6.8 In addition to the statutory consultation which has taken place with statutory bodies, a public consultation exercise has been undertaken to seek feedback.
- 6.9 A flyer was distributed to the closest 500 households and businesses, outlining the key aspects of the scheme, in addition to a CGI of the Proposed Development. The flyer signposted to a dedicated website which hosted an informational video and survey.
- 6.10 A press release was also issued.
- 6.11 The following stakeholders were contacted:
- Graham Stringer, MP for Blackley and Broughton
 - Bev Craig, Leader of Manchester City Council
 - Gavin White, Manchester Cabinet Member for Housing
 - Cllr Shaukat Ali, Cllr Shazia Butt & Naeem Hassan - Cheetham Ward Councillors
 - Cllr Adele Douglas, Cllr Jon-Conor Lyons & Cllr Sam Wheeler - Piccadilly Ward Councillors

- 6.12 A meeting was held with Gavin White, Manchester Cabinet Member for Housing. The comments received during the consultation process have been reviewed by the design team and the alterations to the scheme following the public consultation exercise. Further details can be found in the supporting Statement of Community Involvement which is submitted with the planning application, for completeness this is included as Appendix 6.1.

GEOGRAPHIC SCOPE

- 6.13 The Site as shown in Appendix 2.1 identifies the area covered by the EIA. It is important to note however, that the influence of many predicted impacts can extend beyond the immediate Site boundary. By way of example, visual impacts will extend beyond the site boundary. Off-site impacts have also been assessed as part of the EIA.

TEMPORAL SCOPE

- 6.14 It is anticipated that the development could commence during Q2 2024 and be complete in Q4 2026. Site enabling works could commence in December 2023 and complete in February 2024. The construction programme is 193 weeks long, from February 2024 to November 2026.
- 6.15 The EIA is based on the comparison of expected impacts created by the construction and operation of the Proposed Development compared with current or recent baseline environmental conditions unless stated in individual technical chapters.

TECHNICAL SCOPE

- 6.16 A formal Scoping exercise has been undertaken. This comprised steps including the identification of the key characteristics of the Site, the establishment of the environmental baseline through a series of desk and field studies, informal consultation with key stakeholders, and the initial consideration of the potential sources and nature of environmental impacts through assessment against the environmental baseline.
- 6.17 This initial assessment was prepared and submitted as a Scoping Report to MCC who subsequently undertook a period of formal consultation with consultees and provided a formal Scoping Response.
- 6.18 As set out in the Scoping Report, there are a number of issues which have been assessed as unlikely to give rise to significant environmental effects, and subsequently agreed with MCC. The reasons why these topics are agreed to not give rise to significant environmental effects are detailed below. No additional topics have been scoped out since the preparation of the Scoping report.
- 6.19 Notwithstanding the above topics that are scoped out of the ES, the planning application is supported by further assessments and technical reports which cover 'scoped out' topics in many cases. The assessments and reports ensure that relevant planning policies are considered, and that other relevant legislation and guidance

is complied with. A list of documents submitted with the planning application is included at Appendix 2.2.

Air Quality

- 6.20 The Council agreed that air quality can be scoped out and the planning application should be supported by an Air Quality Assessment. Miller Goodall have prepared a standalone Air Quality Assessment to support the planning application, which provides an assessment of the potential air quality impacts associated with the construction and operational phases of the proposed development. The response from MCC states that the air quality assessment should assess the impact on existing receptors and an exposure assessment for future occupiers including an assessment of particulate matter PM2.5 and PM10 along with nitrogen oxide concentrations.
- 1.23 The scope of the air quality report and methodology which did not propose modelling was agreed with the Environmental Protection Officer at MCC prior to the application submission. Modelling the effect of air quality on the proposed development was scoped out, as there is no parking associated with the development, the building would be electrically heated and the testing and maintenance of the emergency generator was less than 18 hours annually. Modelling the effect of air quality on the Proposed Development was scoped out because the annual air quality objectives do not apply to commercial areas; however, the one-hour NO2 objective still applies. The annual mean and short-term air quality objectives apply to the residential units. Based on TfGM 2016 modelling, nearby diffusion tubes and residential dwellings being located on the second floor and above, it was concluded that the site was suitable for its intended use, with regards to air quality.
- 6.21 The Council requested that the Construction Environmental Management Plan includes the recommendations from the Air Quality Report to control dust.

Aviation

- 6.22 The Council confirmed aviation can be scoped out of the EIA. Due to the site's location within Manchester Airport's safeguarded area consideration should therefore be made to whether development within the area impacts on the airport's operations.

Archaeology

- 6.23 It was agreed with the Council that archaeology can be scoped out. An Archaeological Desk-Based Assessment has been prepared to support the planning application. The study site is considered to have a low potential for archaeological remains of pre-historic to medieval date, and a high potential for archaeological remains of post-medieval to modern date. It is likely that any archaeological deposits would be of up to low or local importance.

Ecology

- 6.24 It was agreed with the Council that ecology can be scoped out. A Preliminary Ecological Appraisal and bat roosting survey has been prepared by Erap to support the planning application. Due to the site's characteristics and location, it has limited potential to support protected species and there are no protected or sensitive habitats on the site or within its immediate vicinity. There are no statutory or non-statutory nature conservation designations on the site. There are unlikely to be any direct or indirect impacts from the proposed development on any statutory designated sites during construction and operational phases. The proposed development will therefore not have significant environmental impacts.

Flood Risk and Drainage

- 6.25 It was agreed with the Council that flood risk and drainage can be scoped out of the EIA. The site is located entirely within Flood Risk Zone 1 as defined by the Environment Agency Flood Risk Map for Planning. The site is below 1 hectare and therefore a Flood Risk Assessment is not required to support the planning application. A drainage strategy prepared by Roscoe Engineering has been prepared to support the planning application as a standalone report.

Ground Conditions

- 6.26 Ground conditions has been scoped out of the ES. A standalone Phase 1 Geo-Environmental Investigation and Preliminary Mining Risk Assessment has been prepared by Calabrian. There is potential for made ground on site yet there are no expected off-site contamination, geotechnical hazards or other constraints. The mining risk associated with coal is considered negligible. This topic was agreed with MCC to be excluded from the ES.

Highways

- 6.27 A Highways chapter was agreed to be scoped out of the ES with the Council.
- 6.28 SK Transport have prepared a standalone Transport Assessment and Travel Plan that considers the highways impact, to include the information requested by Transport for Greater Manchester and MCC Highways.

Human Health

- 6.29 It was agreed with the Council that the Proposed Development will not have a significant impact on Human Health, and that the impact will be considered across technical chapters of the ES rather than in a dedicated ES chapter.

Noise & Vibration

- 6.30 It was agreed with MCC that the noise impacts from the Proposed Development on nearby sensitive receptors could be scoped out. A Noise Impact Assessment has been undertaken by Miller Goodall to support the planning application, which considers the operational noise impacts.

- 6.31 A Construction Environmental Management Plan has been prepared by United Living and is submitted in support of the application, to manage noise during the construction phase, which has been requested to include noise and vibration limits at the site boundary, details of noise and vibration monitoring, details of equipment and machinery to be used, their expected noise level, location of the identified receptors, site wide mitigation measures. A section confirming the site hours and details of stakeholder engagement and complaints procedure is provided.

Telecommunications

- 6.32 It was agreed with the Council that this could be scoped out of the ES. GTech Surveys Limited have prepared a standalone TV and Radio Reception Survey which considers the potential and magnitude of television interference as a result of operational and development phases of the proposed development.

Lighting

- 6.33 Lighting was agreed with the Council to be scoped out of the ES. A lighting strategy is submitted by Futureserv to support the planning application.

Risk of Major Accidents and Disasters

- 6.34 Given the proposed development's location in the UK, seismic events are rare. Considering the nature of the proposed development, the commitment to building regulations and statutory requirements, a chapter assessing major accidents and or natural disasters is scoped out of the ES. This was agreed with the Council.

Utilities

- 6.35 This can be scoped out. A Utility Statement (including Broadband Connectivity Assessment) has been prepared by Futureserv to support the application.

Waste

- 6.36 This can be scoped out. Waste during construction will be dealt with in the Construction and Environmental Management Plan prepared by United Living, and by a Waste Management Strategy and Proforma during the operational phase.

ASSESSMENT CRITERIA

- 6.37 The general approach to the EIA is to study and understand the baseline environmental characteristics and conditions, and to assess the potential changes to this baseline as a result of the development. In determining whether a change or effect is significant, it will be necessary to understand the value, importance or significance of a 'receptor' and then to understand the magnitude and nature of the change.

RECEPTOR SENSITIVITY

- 6.38 The sensitivity of a receptor refers to its importance, i.e. its environmental value/attributes. Receptors with very high sensitivity for example would include a UNESCO World Heritage site, whereas one with low sensitivity may include of Conservation Area. The terminology defining sensitivity can vary according to discipline or the methodology being used. However, within this ES sensitivity is generally determined as high, moderate, low or negligible.
- 6.39 Each individual chapter within this ES considers the attributes of specific receptors in more detail.

IMPACT MAGNITUDE

- 6.40 Magnitude is determined by predicting the scale of any potential change in the baseline conditions. Where possible, magnitude has been quantified; however, where this has not been possible a fully defined qualitative assessment has been undertaken. Magnitude will be defined within each chapter along a sliding scale and will generally be described as High, Medium, Low or Negligible. Magnitude of change will be defined as high, medium, low or negligible.

DETERMINING SIGNIFICANCE OF IMPACT

- 6.41 The level of impact is identified by combining receptor sensitivity with the magnitude of change. Chapters will typically include a matrix identifying how the two combine, to determine the level of impact. The assessment of potential effects will relate to both the construction and operational phases of development.
- 6.42 The sensitivity or value of the receptor is usually derived from:
- legislative controls;
 - designated status;
 - the number of individual receptors (e.g. residents);
 - characteristics such as rarity or condition; and
 - the ability of the receptor to absorb change.
- 6.43 Determination of significance has regard to the following:
- extent and magnitude of the impact;
 - type of impact (beneficial or adverse);
 - nature of impact (direct, indirect, reversible or irreversible);
 - duration of impact (permanent, long-term, short-term, reversible or irreversible);
 - frequency of impact; and

- comparison with environmental policies and quality standards.
- 6.44 Table 6.1 indicates how sensitivity and magnitude are considered together to determine the significance of an impact. This is a standard methodology that has been used on all the technical chapters. Where topics have deviated from this method and used different assessment criteria this is clearly stated within the relevant chapter.

Table 6.1: Matrix for determining significance of impact

Magnitude of change/impact	Receptor Sensitivity/Importance			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Minor	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

- 6.45 Where an impact is considered to be significant, this will generally be classified as negligible, minor, moderate or major. Impacts can be beneficial, adverse or not significant. In general, the definition of these impacts can be described as follows:

- Negligible: No or barely perceptible change from the baseline position
- Minor: These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Nevertheless, they are of relevance in the detailed design of the project and consideration of mitigation or compensation measures
- Moderate: These effects, if adverse, while important at a local local scale, are not likely to be key decision-making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or on a particular resource. They represent issues where effects will be experienced but mitigation measures and detailed design work may ameliorate/enhance some of the consequences upon affected communities or interests. Some residual effects will still arise
- Major: These effects are likely to be important considerations at a regional or district scale, and if adverse, are potential concerns to the project, depending upon the relative importance attached to the issue during the decision-making process. Mitigation measures and detailed design work are unlikely to remove all of the effects upon the affected communities or interests

MITIGATION

- 6.46 Schedule 4 Part 7 of the EIA Regulations sets out the information that must be included in as ES, this includes 'Description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.'

- 6.47 The assessment of magnitude is carried out considering any embedded mitigation, i.e. any relevant design features which form part of the development as proposed. Since EIA is an iterative process which has taken place as part of the design process, significant mitigation has already been incorporated into the scheme. Embedded mitigation is described in Chapter 4 and within each technical chapter where relevant.
- 6.48 Additional or secondary mitigation may be required in order to reduce identified impacts further. Therefore, impacts are identified in relation to the Proposed Development, and subsequently 'residual impacts' are identified taking 'additional mitigation' into consideration. The subsequent assessment of residual environmental effects is the final outcome of the EIA process. Residual effects are identified as being significant or not.
- 6.49 Mitigation can include measures to prevent impacts arising, to reduce the magnitude of effects, to off-set effects or enhance positive aspects of the development.

CUMULATIVE EFFECTS

- 6.50 The EIA Regulations also require the consideration of the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources.
- 6.51 The list of cumulative developments that could have significant combined effects is provided at Appendix 6.1.

STRUCTURE OF TECHNICAL CHAPTERS

- 6.52 A common structure has been used for each of the technical chapters throughout the ES as follows:
- Introduction
 - Relevant Legislation and Guidance
 - Assessment Methodology and Significance Criteria
 - Baseline Conditions
 - Sensitive Receptors
 - Assessment of Effects
 - Mitigation
 - Cumulative Effects
 - Summary and Residual Effects
 - References

- 6.53 The penultimate chapter of the ES considers the Proposed Development's cumulative and interactive effects, to consider firstly the inter-relationships between the Proposed Development and the committed developments in the area surrounding the site, and secondly the inter-relationship between the identified impacts arising from the Proposed Development.
- 6.54 The final chapter collates the impacts upon receptors that have been identified in each of the technical chapters of this ES and confirms the residual effects once the mitigation measures have been incorporated into the Proposed Development.

ASSUMPTIONS AND LIMITATIONS

- 6.55 The EIA Regulations require that the ES must include the information reasonably required for reaching a conclusion on the significant effects of the environment, taking into account current knowledge and methods of assessment. The ES must also state any "details or difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties known". Each chapter in this ES has a section on assumptions and limitations.
- 6.56 A number of assumptions have been made during the preparation of the EIA, as set out below. Assumptions include:
- The assessment includes the year 2023 as the 'baseline year' (unless otherwise stated). Impacts arising from enabling works/site clearance works are highlighted where appropriate along with mitigation measures.
 - The assumed year for first occupation of the Proposed Development will be 2026. It is expected that the construction programme will commence in 2024 and be completed over a period of 137 weeks.
 - Baseline conditions have been established from a variety of sources, including historical data. Due to the dynamic nature of certain aspects of the environment, conditions may change during the construction and operation of the scheme.
 - All relevant legislative requirements will be met.
 - The Proposed Development will be demolished and constructed in accordance with industry standard techniques and currently enforced mandatory minimum standards and assumes suitably experienced contractors will be appointed to design, construct and commission the development.
 - A Construction Environmental Management Plan (CEMP) will be prepared prior to commencement of demolition/construction and will contain all the design and additional mitigation as identified and reported within this ES and any subsequently agreed requirements, expected to be enforced by planning conditions. The details of these documents would be agreed with the LPA and environmental health prior to construction commencing.
- 6.57 The EIA is subject to the following limitations:

- The nature of the EIA required subjective and objective assessment to be made of the predicted impacts, and as such includes a degree of professional judgement. The assessment is explicit in recognising areas of limitation and any assumptions made. Where appropriate, the assessment of significance has been given confidence levels.
- Although surveys and assessments are accurate at the time of completion, due to the dynamic nature of the environment, conditions may change over time.

7. DAYLIGHT AND SUNLIGHT

INTRODUCTION

- 7.1 This Chapter of the ES assesses the likely significant effects of the Proposed Development with respect to daylight and sunlight amenity.
- 7.2 The chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the Site and surrounding area; the mitigation measures required to prevent, reduce or offset any significant negative effects; and the likely residual effects after these measures have been adopted.
- 7.3 The chapter should be read in conjunction with detailed information provided in the following appendices:
- Appendix 7.1: Drawings of the existing and proposed situations; &
 - Appendix 7.2: Daylight and sunlight analysis results for surrounding sensitive receptors.

RELEVANT LEGISLATION & GUIDANCE

- 7.4 There is no legislation that governs daylight and sunlight.
- 7.5 The following policies and guidance have informed the assessment of effects within this Chapter:
- Revised National Planning Policy Framework 2021 (Ref 1);
 - National Planning Policy Guidance 2021 (Ref 2);
 - Manchester Core Strategy (2012 – 2027) (Ref 3);
 - Guide to Development in Manchester Supplementary Planning Document and Planning Guidance (Adopted April 2007) (Ref 4); &
 - BRE 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice' (2022) (the BRE Guidelines) (Ref 5)

ASSESSMENT METHODOLOGY & SIGNIFICANCE CRITERIA

Study Area

- 7.6 The assessment of daylight and sunlight amenity is governed principally by the extent that the sky is obscured by the existing and proposed structures (obstructions) which surround a sensitive receptor.
- 7.7 The BRE Guidelines suggest that residential properties have the highest requirement for daylight and sunlight and stating that:

- 7.8 *"the guidelines are intended for use for rooms in adjoining dwellings where light is required, including living rooms, kitchens and bedrooms."*
- 7.9 Due to their transient residential nature, hotels have also been included within the assessments.
- 7.10 The consented but not yet constructed One Lord Street has also been included as a sensitive receptor.
- 7.11 Commercial properties are generally deemed to have a greater reliance upon supplementary electric lighting and have therefore not been included within the assessment.
- 7.12 As there is no specific guidance relating to the extent of a study area, it has been established by attending Site and using professional judgment to determine the number of properties surrounding the Site which may be affected by any additional obstruction of the sky as a result of the construction of the Proposed Development.
- 7.13 A desktop review of the surrounding land uses and internal configurations has also been undertaken using information and data sourced from the Manchester City Council (MCC) planning portal, the Valuation Office Agency (VOA), HM Land Registry's website and online marketing material.
- 7.14 Where information to identify habitable rooms was unavailable, room uses and layouts were assumed to be habitable and their sizes and layouts assumed using professional judgement.
- 7.15 The locations of the sensitive receptors relative to the Site and which have formed the focus of the assessments are shown in Figure 7.1. The property details are listed in Table 7.1.

Figure 7.1: Location of Surrounding Sensitive Receptors



Table 7.1: Sensitive Receptor Names & Uses

Plan Ref	Property Name	Property Use
1	Jefferson Place	Residential
2	Park Inn	Hotel
3	Hallmark Tower	Residential
4	Cypress Place	Residential
5	Barton Place	Residential
6	Number One Lord Street	Future Residential
7	4 Park Place	Residential

Method of Assessment

Demolition and Construction

- 7.16 Owing to the evolving and changing nature of demolition and construction activities, the assessment of potential effects during demolition and construction of the Proposed Development on daylight and sunlight to surrounding sensitive receptors has not been modelled and analysed. Instead, qualitative narrative has been provided using professional judgement and experience.

Completed Development

- 7.17 The daylight and sunlight assessments used to prepare this chapter are based upon the BRE Guidelines. All relevant standards within the BRE Guidelines are set out in the following paragraphs.
- 7.18 The BRE Guidelines provide two different methods for assessing daylight and one method for assessing sunlight.

Daylight

- 7.19 The relevant daylight assessment methods are the Vertical Sky Component (VSC) method and the No Sky Line (NSL) method.
- 7.20 **VSC** - is a quantified measurement of the amount of skylight falling on a vertical wall or window. This is the ratio of the direct sky luminance falling on a vertical wall at the reference point for the simultaneous horizontal luminance under an unobstructed sky. The Commission International de l'Eclairage (CIE) 'standard' overcast sky is used, the ratio is then expressed as a percentage. The maximum value achievable is approximately 40% for a completely unobstructed vertical wall.
- 7.21 VSC may be calculated by using the sky light indicator or Waldram Diagram. For calculation purposes, trees may be ignored unless they form dense continuous belts. The computer model created for the daylight assessments presented within this assessment has used Waldram Diagrams to establish the VSC.
- 7.22 **NSL** - is a measure of the distribution of daylight at the 'working plane' within a room. In houses, the 'working plane' means a horizontal 'desktop' plane of 0.85 m in height. The NSL divides those areas of working plane in a room which receive direct

sky light through the windows from those areas of the working plane which cannot. If a significant area of the working plane lies beyond the NSL (i.e. it receives no direct sky light) then the distribution of daylight in the room would be poor and supplementary electric lighting may be required.

- 7.23 The potential effect of the daylighting distribution in the surrounding existing buildings is established by plotting the NSL in each of the main rooms. For residential dwellings, this includes living rooms, dining rooms and kitchens. Bedrooms are also analysed although they are less important in terms of the amount of daylight received by virtue of their usage.

Sunlight

- 7.24 The relevant sunlight assessment method is the Annual Probable Sunlight Hours (APSH) method.

- 7.25 **APSH** - The BRE Guidelines state in Section 3.2.3 that:

"all main living rooms of dwellings...should be checked if they have a window facing within 90° of due south... Normally loss of sunlight need not be analysed to kitchens and bedrooms, except for bedrooms that also comprise a living space..."

- 7.26 Section 3.2.5 continues:

"If the main living room to a dwelling has a main window facing within 90° of due north, but a secondary window facing within 90° of due south, sunlight to the secondary window should be checked."

- 7.27 The BRE Guidelines suggest at paragraph 3.2.6 that when assessing sunlight for existing neighbouring buildings:-

"If a room can receive more than one quarter of...APSH, including at least 5% of APSH in the winter months between 21 September and 21 March, then it should still receive enough sunlight."

Three-Dimensional Model

- 7.28 Each of the daylight and sunlight methods described above have been implemented using specialist computer software applied to a three-dimensional AutoCAD model. Waldram Diagrams have been used to establish the VSC and 3D geometric calculations for NSL.

- 7.29 Any available floor plan information has been worked into the three-dimensional computer model to provide NSL calculations to a high degree of accuracy which can, therefore, provide accurate representations of the light conditions within the rooms of many of the surrounding buildings.

Significance Criteria

- 7.30 The results of each assessment are compared against the criteria set out in the BRE Guidelines.
- 7.31 The BRE Guidelines are predicated upon a suburban environment with minimum VSC values being based upon obstruction angles of 25°. Therefore, a degree of flexibility can, in accordance with Appendix F of the BRE Guidelines, be applied when assessing the significance of daylight and sunlight effects in more urban locations.
- 7.32 Appendix H: Environmental impact assessment of the BRE Guidelines states that:
- “Adverse impacts occur when there is a significant decrease in the amount of skylight and sunlight reaching an existing building where it is required...”*
- “The assessment of impact will depend on a combination of factors, and there is no simple rule of thumb that can be applied.”*
- 7.33 In view of the above, the interpretation of the daylight and sunlight results must be assessed in terms of the quantum of light lost or gained, not purely on the percentage of change. The percentage value may well be misleading, particularly where the baseline values are small. In these situations, a small change in the quantum of light could represent a high percentage change in the overall figure, implying that there would be a significant change in daylight and sunlight whereas, in reality, the difference would be negligible.
- 7.34 The assessment criteria provided within the BRE Guidelines are presented in Table 7.2.

Table 7.2: BRE Daylight and Sunlight Criteria for Sensitive Receptors

Method	BRE Criteria
VSC	A window may be adversely affected if its VSC measured at the centre of the window is less than 27% and less than 0.8 times its former value.
NSL	A room may be adversely affected if the daylight distribution (NSL) is reduced beyond 0.8 times its existing area.
APSH	A window may be adversely affected if a point at the centre of the window received for the whole year, less than 25% of the APSH including at least 5% of the APSH during the winter months (21 September to 21 March) and less than 0.8 times its former sunlight hours during either period, and for existing neighbouring buildings, if there is a reduction in total APSH which is greater than 4%.

- 7.35 At paragraph 2.2.8 of the BRE Guidelines it states:-

“If there would be a significant loss of light to the main window but the room also has one or more smaller windows, an overall VSC may be derived by weighting each VSC element in accordance with the proportion of the total glazing area represented by its window.”

- 7.36 The assessment criteria specified within the BRE Guidelines only suggests where a change in daylight may be noticeable to the occupants. It does not further define effects beyond this. As such, for the purposes of this assessment, effects beyond the levels suggested by the BRE Guidelines have been defined as adverse or beneficial depending upon whether the property's amenity would be more or less favourable than the baseline situation. These effects have also been described as negligible, minor, moderate or major using professional judgement, and by reference to the criteria summarised within Table X.X.

Table 7.3: Daylight and Sunlight Significance Criteria

Significance	Description
Negligible	Negligible No alteration or a small alteration from the existing scenario which is within the numerical levels suggested in the BRE Guidelines.
Minor Adverse	Minor Adverse Marginal infringements (20.1-30%) of the numerical values suggested in the BRE Guidelines, which should be viewed in context.
Moderate Adverse	Moderate Adverse Moderate infringements (30.1-40%) of the numerical values suggested in the BRE Guidelines, which should be viewed in context.
Major Adverse	Major Adverse Major infringements (40%+) of the numerical values suggested within the BRE Guidelines, which should be viewed in context.

- 7.37 Within Appendix F of the BRE guidelines it states that the numerical target values for assessing how much light from the sky is blocked by obstructing buildings are purely advisory and, as such, different targets may be used. For example:

"...in a historic city centre...the obstruction from ground floor window level might be close to 40°. This would correspond to a VSC of 18%, which could be used as a target value for development...if new development is to match the existing layout"

- 7.38 This suggests that a more realistic VSC value for an urban location would be 18% rather than 27%. This is 66.7% of the standard target value.
- 7.39 The standard NSL target value is 80% of the room area. 66.7% of this target value is 53.4%.
- 7.40 The effect of the Proposed Development upon the daylight amenity to a room in this context is therefore also considered to be minor adverse in situations where:
- Any VSC and/or NSL alteration is no greater than 30% of the baseline value; and
 - Despite any VSC and/or NSL alterations, all windows serving the room retain at least 18% VSC and the room which they serve retains at least 53.4% NSL.
- 7.41 Effects classified as Moderate or Major in scale are typically considered to be 'significant'. Effects classified as Minor or Negligible in scale are typically considered to be 'not significant'.

BASELINE CONDITIONS

- 7.42 Detailed drawings of the baseline scenario models can be found at Appendix 7.1. The drawings in Appendix 7.1 indicate the position of the surrounding sensitive receptors in relation to the existing Site.
- 7.43 A total of 1191 Site facing windows serving 725 rooms within 7 buildings were assessed for VSC and NSL and 49 rooms within 3 buildings were assessed for APSH.
- 7.44 The full Baseline daylight and sunlight results can be found in Appendix 7.2 and are summarised in Table 7.4 below.

Table 7.4: Baseline Daylight and Sunlight Levels

Address	Total No. Windows That Meet VSC Criteria		Total No. Rooms That Meet NSL Criteria		Total No. Rooms That Meet APSH Criteria	
	Total	Pass	Total	Pass	Total	Pass
Jefferson Place	332	79	157	88	11	11
Park Inn 2 Cheetham Hill Road	90	90	78	78	0	0
Hallmark Tower	208	136	164	163	5	5
Cypress Place	472	190	275	170	18	18
Barton Place	50	1	30	12	10	4
Number One Lord Street	26	24	13	13	0	0
4 Park Place	13	9	8	8	5	5
Total	1191	529	725	532	49	43

- 7.45 From the above, it is evident that, due to their urban location and, for some properties, the presence of restrictive existing balconies, many of the windows and rooms do not meet the minimum standards recommended within the BRE Guidelines. This means that even small actual changes may result in percentage of baseline changes which are disproportionate to the actual change experienced.

ASSESSMENT OF EFFECTS

Demolition and Construction

- 7.46 Since the potential daylight and sunlight effects relating to the demolition and construction works will vary throughout the term and gradually increase to the potential effects identified for the completed Proposed Development, the interim construction effects will not be assessed quantitatively as it is considered that the completed Proposed Development represents the worst-case assessment in terms of likely daylight and sunlight.

Completed Development

- 7.47 Detailed drawings of the Completed Development scenario models can be found at Appendix X.1. The drawings in Appendix X.1 indicate the position of the surrounding sensitive receptors in relation to the Site.
- 7.48 A total of 1191 Site facing windows serving 725 rooms within 7 buildings were assessed for VSC and NSL and 49 rooms within 3 buildings were assessed for APSH.
- 7.49 The full Completed Development daylight and sunlight results can be found in Appendix X.2 and are summarised in Tables 7.5, 7.6, 7.7 and 7.8 below.

Table 7.5 – Summary of VSC Daylight Results

Address	Total No. of windows	No. of windows that meet BRE Guidelines	Below BRE Guidelines		
			Minor Adverse	Moderate Adverse	Major Adverse
Jefferson Place	332	332	0	0	0
Park Inn 2 Cheetham Hill Road	90	60	6	16	8
Hallmark Tower	208	151	4	38	15
Cypress Place	472	472	0	0	0
Barton Place	50	50	0	0	0
One Lord Street	26	26	0	0	0
4 Park Place	13	0	0	0	13
TOTALS	1191	1091	10	54	36

Table 7.6 – Summary of NSL Daylight Results

Address	Total No. of rooms	No. of rooms that meet BRE Guidelines	Below BRE Guidelines		
			Minor Adverse	Moderate Adverse	Major Adverse
Jefferson Place	157	157	0	0	0
Park Inn 2 Cheetham Hill Road	78	60	12	6	0
Hallmark Tower	164	143	11	0	10
Cypress Place	275	248	16	7	4
Barton Place	30	30	0	0	0
One Lord Street	13	13	0	0	0
4 Park Place	8	0	2	1	5
TOTALS	725	651	41	14	19

Table 7.7 – Summary of Annual APSH sunlight Results

Address	Total No. of rooms	No. of rooms that meet BRE Guidelines	Below BRE Guidelines Annual APSH		
			Minor Adverse	Moderate Adverse	Major Adverse
Jefferson Place	11	11	0	0	0
Hallmark Tower	5	5	0	0	0
Cypress Place	18	18	0	0	0
Barton Place	10	10	0	0	0
4 Park Place	5	2	0	0	1
TOTALS	49	46	0	0	1

Table 7.8 – Summary of Annual APSH sunlight Results

Address	Total No. of rooms	No. of rooms that meet BRE Guidelines	Below BRE Guidelines Annual APSH		
			Minor Adverse	Moderate Adverse	Major Adverse
Jefferson Place	11	11	0	0	0
Hallmark Tower	5	5	0	0	0
Cypress Place	18	18	0	0	0
Barton Place	10	10	0	0	0
4 Park Place	5	2	0	0	3
TOTALS	49	46	0	0	3

7.50 In situations where the construction of the proposed development would result in VSC, NSL and APSH alterations to the windows and rooms within a property which are all within the BRE guidelines, the effect of the Proposed Development upon the daylight and sunlight amenity to that property is considered to be negligible.

7.51 Of the 7 properties assessed, the effect of the Proposed Development upon the daylight and sunlight amenity within the 3 properties listed within Table X.X would be negligible (**not significant**).

Table 7.9: Properties with a Negligible Daylight and Sunlight effect

Properties with a Negligible Daylight and Sunlight effect	
Jefferson Place	Barton Place
One Lord Street	

7.52 The remaining 4 properties are discussed in detail below:-

Park Inn 2 Cheetham Hill Road

Daylight

7.53 A total of 90 windows serving 78 rooms were assessed for daylight within this property.

7.54 Any changes in daylight amenity (VSC & NSL) to 48 of the 78 rooms assessed will be fully BRE compliant. The effect upon daylight amenity within these 48 rooms is therefore considered to be negligible.

7.55 In accordance with the significance criteria described above, the remaining 30 rooms will experience changes in VSC and/or NSL which are minor. The effect upon the daylight amenity within these 30 rooms is therefore considered to be minor.

- 7.56 The effect of the Proposed Development upon the daylight amenity within Park Inn 2 Cheetham Hill Road is considered to be minor adverse **(not significant)**.

Sunlight

- 7.57 This property is not material for sunlight assessment as none of its windows are orientated to within 90° of due south
- 7.58 The effect of the Proposed Development upon the sunlight amenity within Park Inn 2 Cheetham Hill Road is considered to be negligible **(not significant)**.

Hallmark Tower

Daylight

- 7.59 A total of 208 windows serving 164 rooms were assessed for daylight within this property.
- 7.60 Any changes in daylight amenity (VSC & NSL) to 107 of the 164 rooms assessed will be fully BRE compliant. The effect upon daylight amenity within these 107 rooms is therefore considered to be negligible.
- 7.61 In accordance with the significance criteria described above, 42 of the remaining 57 rooms will experience changes in VSC and/or NSL which are minor. The effect upon the daylight amenity within these 30 rooms is therefore considered to be minor.
- 7.62 One of the two windows serving each of 5 of the remaining 15 rooms (all bedrooms) has a very low (5.2% to 5.6% against the BRE recommended 27%) baseline VSC level. This means that the small (3.3% to 3.6%) VSC changes as a consequence of the construction of the Proposed Development disproportionately present themselves as major adverse changes in daylight amenity when, evidently, they are not. The other windows serving these 5 bedrooms will all experience moderate adverse changes in VSC but, as they will maintain very good in context VSC levels of between 24% & 25% against the BRE recommended 27% for a suburban environment, the effect upon these 5 windows is considered to be minor. All 5 rooms will experience fully BRE compliant 0.2% changes in NSL and retain daylight distribution to 96% of the rooms area. The effect upon the daylight amenity to these 5 rooms is, therefore considered, to be minor.
- 7.63 The windows serving the remaining 10 rooms, which comprise an isolated column of single aspect Lounge Kitchen Dining (LKD) rooms all have low (9.9% to 11.8%) VSC values due to their windows all being recessed by balconies. Therefore, the small (4.5% to 7.4%) VSC changes as a consequence of the construction of the Proposed Development disproportionately present themselves as major adverse changes in daylight amenity. Similarly, due to the single aspect nature of these deep multifunction rooms and the location of the windows under balconies, the NSL effects are also material. The effect is, however, acknowledged by the BRE in paragraph 2.2.12 which states:-

"If an existing building contains rooms lit from one side only and greater than 5m deep, then a greater movement of the no sky line may be unavoidable."

- 7.64 It is therefore clear that, whilst the effect of the Proposed Development upon the daylight amenity within these 10 rooms is more material, that effect is exacerbated by the inherent architect of the building.
- 7.65 In view of the small number of rooms which will experience more material effects and the fact that these effects are exacerbated by the design of the building, the effect of the Proposed Development upon the daylight amenity within Hallmark Tower is considered to be minor adverse **(not significant)**.

Sunlight

- 7.66 A total of 5 windows serving 5 rooms were assessed for sunlight within this property.
- 7.67 Any changes in sunlight amenity to all of the 5 rooms assessed will be fully BRE compliant.
- 7.68 The effect of the Proposed Development upon sunlight amenity within Hallmark Tower is considered to be negligible **(not significant)**.

Cypress Place

Daylight

- 7.69 A total of 472 windows serving 275 rooms were assessed for daylight within this property.
- 7.70 Any changes in daylight amenity (VSC & NSL) to 248 of the 275 rooms assessed will be fully BRE compliant. The effect upon daylight amenity within these 248 rooms is therefore considered to be negligible.
- 7.71 In accordance with the significance criteria described above, 16 of the remaining 27 rooms will experience changes in VSC and/or NSL which are minor. The effect upon the daylight amenity within these 16 rooms is therefore considered to be minor.
- 7.72 The remaining 11 rooms will experience changes in NSL which are of moderate or major adverse significance, the windows serving these rooms are, however, fully BRE compliant in VSC terms and experience no greater than a 8.9% of baseline change compared to the 20% at which the BRE states that changes in daylight amenity may be noticeable to the occupants. This is once again an example of unavoidable NSL changes due to single aspect rooms. Furthermore the BRE states at paragraph F7:-

"In assessing the loss of light to an existing building, the VSC is generally recommended as the appropriate parameter to use. This is because the VSC

depends only on obstruction, and is therefore a measure of the daylight environment as a whole."

- 7.73 The effect of the Proposed Development upon the daylight amenity within Cypress Place is considered to be minor adverse **(not significant)**.

Sunlight

- 7.74 A total of 54 windows serving 18 rooms were assessed for sunlight within this property.
- 7.75 Any changes in sunlight amenity to all of the 18 rooms assessed will be fully BRE compliant.
- 7.76 The effect of the Proposed Development upon the sunlight amenity within Cypress Place is considered to be negligible **(not significant)**.

4 Park Place

Daylight

- 7.77 A total of 13 windows serving 8 rooms were assessed for daylight within this property.
- 7.78 The technical analysis results show that, due to its proximity to the Site, the construction of the Proposed Development will cause material changes to both the VSC and NSL levels in this property. The technical analysis also shows, however, that the retained VSC & NSL values are commensurate with the local environment, which can be seen from the current/baseline daylight levels experienced within the lower levels of both Barton Place & Cypress Place.
- 7.79 Overall and in consideration of the levels of retained daylight amenity, the effect of the Proposed Development upon the daylight amenity within 4 Park Place is considered to be minor adverse **(not significant)**.

Sunlight

- 7.80 A total of 10 windows serving 5 rooms were assessed for sunlight within this property.
- 7.81 Any changes in sunlight amenity to 2 of the 5 rooms assessed will be fully BRE compliant.
- 7.82 The remaining 3 rooms will experience material changes to winter sunlight amenity but will all retain very reasonable in context levels of 2% to 4% WPSH against the BRE recommended 5%. 1 of the 3 rooms will also experience a material change in annual sunlight amenity, but will retain a very reasonable in context 12% APSH. The other 2 rooms will continue to experience 31% & 38% APSH against the BRE recommended 25%

- 7.83 The effect of the Proposed Development upon the sunlight amenity within 4 Park Place Place is considered to be minor adverse (**not significant**).

ADDITIONAL MITIGATION & ENHANCEMENT

- 7.84 As the overall effect of the Proposed Development upon the daylight and sunlight amenity within the surrounding sensitive receptors is considered to be not significant, no mitigation measures are recommended.

CUMULATIVE EFFECTS

- 7.85 None of the neighbouring consented/cumulative schemes are considered relevant for a combined effects assessment.
- 7.86 As One Lord Street is to be residential in nature, it has been assumed to have been already constructed and so included within the baseline proposed assessments undertaken.

SUMMARY & RESIDUAL EFFECTS

Table 7.10: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Completed Development			
Reduced Daylight Amenity	Jefferson Place	Negligible	No
	Park Inn 2 Cheetham Hill Road	Minor Adverse	No
	Hallmark Tower	Minor Adverse	No
	Cypress Place	Minor Adverse	No
	Barton Place	Negligible	No
	One Lord Street	Negligible	No
	4 Park Place	Minor Adverse	No
Reduced Sunlight Amenity	Jefferson Place	Negligible	No
	Hallmark Tower	Negligible	No
	Cypress Place	Negligible	No
	Barton Place	Negligible	No
	4 Park Place	Minor Adverse	No

REFERENCES

Table 7.11: References

Ref No	Reference Details
1	Ministry of Housing, Communities & Local Government (2021). National Planning Policy Framework. 2021.
2	Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2021). National Planning Policy Guidance. 2021.
3	Manchester City Council (2012). Manchester Core Strategy (2012 – 2027).

Ref No	Reference Details
4	Manchester City Council (2007). Guide to Development in Manchester Supplementary Planning Document and Planning Guidance Adopted April 2007.
5	Building Research Establishment (BRE) (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice, Third Edition.

8. GREENHOUSE GAS EMISSIONS

INTRODUCTION

- 8.1 This chapter of the ES assesses the likely environmental effects of the proposed development with respect to greenhouse gas (GHG) emissions. This chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the site and surrounding area; the mitigation measures required to prevent, reduce or offset any significant adverse effects; and the likely residual effects after these measures have been adopted.
- 8.2 The chapter is accompanied by a summary of the assumptions and benchmarks that have been used when calculating the GHG emissions (Appendix 8.1, ES Volume 2).

RELEVANT LEGISLATION & GUIDANCE

National legislation and policy

The Climate Change Act 2008 (2050 Target Amendment)

- 8.3 The Climate Change Act 2008 originally required the UK to reduce carbon emissions by at least 80% by 2050 from a 1990 baseline. On 27th June 2019, the UK Government increased the ambition to 100% reduction in carbon emissions by 2050.

Town and Country Planning (EIA) Regulations 2017

- 8.4 Schedule 4, 5(f) of the EIA Regulations states that an EIA is to consider the following in relation to climate change:
- 8.5 "A description of the likely significant effects of the development on the environment resulting from, inter alia... the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change".

National Planning Policy Framework (NPPF) (DLUHC (formerly MHCLG), 2023)

- 8.6 The NPPF states the following in relation to GHG emissions:

"In determining planning applications, local planning authorities should expect new development to:

- Comply with any development plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and
- Take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption."

National Planning Practice Guidance (NPPG) (DLUHC (formerly MHCLG), 2021)

- 8.7 The Climate Change Guidance states the importance of planning to consider climate change:

“Effective spatial planning is an important part of a successful response to climate change as it can influence the emission of greenhouse gases. In doing so, local planning authorities should ensure that protecting the local environment is properly considered alongside the broader issues of protecting the global environment. Planning can also help increase resilience to climate change impact through the location, mix and design of development.”

The Building Regulations Part L 2021 Edition

- 8.8 Building Regulations Part L1A and Part L2A set out minimum legal requirements for energy efficiency in residential (Part L1A) and non-residential (Part L2A) building construction. A new edition of Part L of the Building Regulations came into force in June 2022, with new minimum performance benchmarks set. All buildings on-site will have to comply with the relevant version of Part L.

Regional Planning Policy

Places for Everyone, Joint Development Plan – Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford, Wigan. Publication Stage (GMCA, 2021)

- 8.9 Although this plan is yet to be adopted, the consultation period has closed, and the NPPF provides guidance on the weight that should be given to emerging policies, stating the following:

“Local planning authorities may give weight to relevant policies in emerging plans according to:

- the stage and preparation of the emerging plan (the more advanced its preparation, the greater the weight that may be given)”

- 8.10 The following policies in the joint development plan are of relevance to GHG emissions:

- 8.11 Policy JP-S 1 Sustainable Development states the following:

- “To help tackle climate change, development should aim to maximise its economic, social and environmental benefits simultaneously, minimise its adverse impacts, utilise sustainable construction techniques and actively seek opportunities to secure net gains across each of the different objectives.
- Preference will be given to using previously-developed (brownfield) land and vacant buildings to meet development needs”

- 8.12 Policy JP-S 2 Carbon and Energy states the following:

- *"The aim of delivering a carbon neutral Greater Manchester no later than 2038, with a dramatic reduction in greenhouse gas emissions, will be supported through a range of measures including:*
- *Promoting the retrofitting of existing buildings with measures to improve energy efficiency and generate renewable and low carbon energy, heating and cooling;*
- *Promoting the use of life cycle cost and carbon assessment tools to ensure the long term impacts from development can be captured;*
- *Taking a positive approach to renewable and low carbon energy schemes, particularly schemes that are led by, or meet the needs of local communities;*
- *Keeping fossil fuels in the ground;*
- *Planning for a balanced and smart electricity grid by identifying geographical locations which could support energy assets;*
- *Increasing the range of nature based solutions including carbon sequestration through the restoration of peat-based habitats, woodland management, tree-planting and natural flood management techniques;*
- *Development of Local Area Energy plans to develop cost effective pathways to achieve carbon targets;*

(a) An expectation that new development will:

- Be net zero carbon from 2028 by following the energy hierarchy (with any residual carbon emissions offset), which in order of importance seeks to:
- Minimise energy demand;
- Maximise energy efficiency;
- Utilise renewable energy;
- Utilise low carbon energy; and
- Utilise other energy sources.

(b) Incorporate adequate electric vehicle charging points to future proof for the likely long-term demand, taking account of the potential maximum energy demand for the site;

(a) Where practicable, prioritise connection to a renewable energy/heating/cooling network in the first instance or a low carbon energy/heating/cooling network that is adaptable to non-fossil fuels at a later date;

(b) Achieve energy demand reductions for residential development in terms of space heat demand; hot water energy demand and the delivery of on-site renewable energy generation.

- (c) For renewable energy generation priority should be given to PV installation where technically feasible, alternative technologies will be appropriate where the equivalent generation is evidenced.
- (d) For non-residential developments, achieve at least BREEAM excellent standard (or equivalent) for the reduction of energy use and carbon emissions' category rising to "BREEAM outstanding' equivalent for ENE 01 from 2028.
- (e) Include a detailed energy statement to demonstrate via site relevant evidence how the development has sought to maximize reductions in carbon emissions in line with relevant policy targets, including the minimisation of overheating risks and appropriate measures for post occupancy evaluation. Whole life cycle emissions should be considered where possible."

8.13 Policy JP-S 7 Resource Efficiency states the following:

"The achievement of a circular economy and a zero-waste economy will play a key role in meeting Greater Manchester's ambition of becoming a leading green city region by 2038. The following measures will help to achieve this:

- Using sustainable design and construction techniques to reduce carbon emissions, adapt and future proof to the impact of climate change, reduce and recycle waste and minimise water use."

Local policy and guidance

Manchester's Local Development Framework. Core Strategy Development Plan Document (MCC, 2012)

8.14 The Core Strategy was adopted in July 2012, and includes the following spatial objectives relating to the reduction of GHG emissions:

- SO1. Spatial Principles: Provide a framework within which the sustainable development of the city can contribute to halting climate change; and
- SO6. Environment: Protect and enhance both the natural and built environment of the city and ensure the sustainable use of natural resources, in order to mitigate and adapt to climate change, support biodiversity and wildlife, improve air, water and land quality, recreational opportunities and provide networks of high-quality green infrastructure, ensuring that the city is inclusive and attractive to residents, workers, investors and visitors.

8.15 Policies relevant to GHG emissions are set out below:

8.16 Policy EC1 Employment and Economic Growth in Manchester states the following:

- "Development proposals should have regard to:

- Climate change resilience demonstrating how CO₂ emissions will be minimised with an aim of zero carbon emissions, through energy efficiency, renewable energy and contributing to low and zero carbon decentralised energy infrastructure."

8.17 Policy C2 District centres states the following:

"New development should deliver improvements to the quality and accessibility of the centre environment. Opportunities should be taken to adopt sustainable building design and practices to assist in adapting to climate change."

8.18 Policy EN 4 Reducing CO₂ Emissions by Enabling Low and Zero Carbon Development states the following:

- "The Council will seek to reduce fuel poverty and decouple growth in the economy, growth in CO₂ emissions, and rising fossil fuel prices, through the following actions:
- All development must follow the principle of the Energy Hierarchy, being designed;
- to reduce the need for energy through design features that provide passive heating, natural lighting and cooling;
- to reduce the need for energy through energy efficient features such as improved insulation and glazing; and
- to meet residual energy requirements through the use of low or zero carbon energy generating technologies.
- Wherever possible new development and retrofit projects, including energy generation plant, must be located and designed in a manner that allows advantage to be taken of opportunities for low and zero carbon energy supplies;
- Where possible new development and retrofit projects will be used as a mechanism to help improve energy efficiency and provide low and zero carbon energy supplies to existing buildings;
- Where appropriate new development and retrofit projects will be required to connect to and/or make contributions to low or zero carbon energy schemes and/or to incorporate provision to enable future connection to any existing/potential decentralised energy schemes; and
- The use of building materials with low embodied carbon in new development and refurbishment schemes."

8.19 Policy EN 6: Target Framework for CO₂ reductions from low or zero carbon energy supplies states the following:

"Applications for residential development of 10 or more units and all other development over 1,000 sqm will be expected as a minimum to meet the target shown in Table 7.1 and Table 7.2, unless this can be shown not to be viable. This

should be demonstrated through an energy statement, submitted as part of the Design and Access Statement. Such a statement will be expected to set out the projected regulated energy demand and associated CO₂ emissions for all phases of the development."

8.20 "The target framework relates to three broad development locations and their potential for low and zero carbon, decentralised energy. The areas are defined as follows

- Target 1 Network development areas: Locations where the proximity of new and existing buildings, the mix of uses and density of development provide the right conditions to support district heating (and cooling).
- Target 2 Electricity intense areas: Locations where the predominant building type has an all electric fit-out such as retail units and leisure complexes.
- Target 3 Micro-generation areas: Locations where lower densities and a fragmented mix of uses tend to mean that only building scale solutions are practical."

Table 8.1 Domestic CO₂ emissions reduction targets (Core Strategy Development Plan, 2012)

Target	% Minimum requirement
Target 1: Network development area	CHP/district heating anchor or connection or where not feasible a 15% increase on Part L 2010
Target 2: Electricity intense buildings	+15% increase on Part L 2010
Target 3: Micro generation area	+15% increase on Part L 2010

Table 8.2: Non-domestic CO₂ emissions reduction targets (Core Strategy Development Plan, 2012)

Target	% Minimum requirement
Target 1: Network development area	CHP/district heating anchor or connection or where not feasible a 15% increase on Part L 2010
Target 2: Electricity intense buildings	+10% increase on Part L 2010

Target 3: Micro generation area	+15% increase on Part L 2010
---------------------------------	------------------------------

"The energy statement will be required to be submitted at the outset of any proposed development (outline application or before). Developers will be permitted to use green infrastructure elements such as green roofs, green walls, street trees and waterways to contribute to compliance with CO₂ mitigation, subject to the energy statement incorporating evidence such as modelling to demonstrate compliance."

8.21 Policy EN 8 Adaptation to Climate Change states the following:

"Developers will be permitted to use green infrastructure elements such as green roofs, green walls, street trees and waterways to contribute to compliance with CO₂ mitigation under Policy EN6, subject to sufficient evidence to quantify their contribution to compliance."

Manchester City Council Climate Change Action Plan 2020 – 2025

8.22 The Manchester City Council (MCC) Climate Change Action Plan sets out MCC's commitments to tackling climate change from 2020-2025 and builds on previous plans over the last decade.

8.23 It summarises the specific actions which are required to ensure that MCC reduces its direct emissions by at least 50% by 2025 (compared to 2019/20) whilst also playing its full part in supporting and influencing the city to do the same.

8.24 The purpose of the plan is as follows:

- *"The document sets out MCC's commitments to tackling climate change over the next 5 years and builds on previous action plans over the last decade; and*
- *It covers MCC's plans for adapting to the expected impacts of climate change and supporting and influencing others, including through the implementation of the Manchester Green and Blue Infrastructure Strategy 2015-2025"*

8.25 Specific commitments that MCC are making are:

- *"Deliver at least a 50% reduction in carbon emissions from our buildings, energy and transport by 2025 (from circa 30-32,000 tonnes in 2019/20 to circa 15-16,000 tonnes in 2024/25) via a 13% year on year reduction;*
- *Report quarterly on progress against the actions in the plan and provide quantitative reports on data in tonnes of CO₂; and*
- *Become zero carbon by 2038 at the latest (based on the Tyndall Centre for Climate Research definition of zero which is at least a 95% reduction i.e., a*

reduction of 35,547 tonnes CO2 from the 2018/19 total which would mean that the Council's direct emissions in 2037/38 would be less than 1,871 tonnes CO2)."

8.26 The plan states the following in relation to citywide emissions:

- *"The Council also recognises the importance of supporting and influencing our residents and organisations to take action to reduce their direct and indirect CO2 emissions and to adapt to the changing climate."*

Manchester Climate Change Framework 2020 – 2025

8.27 Produced by the Manchester Climate Change Partnership, the Manchester Climate Change Framework 2020-2025 is the city's high-level strategy for tackling climate change. It sets out how Manchester will play its full part in limiting the impacts of climate change.

8.28 The objectives and targets include:

- *"Staying within our carbon budgets – based on recommendations by the Tyndall Centre for Climate change Research in 2020;*
- *Climate adaptation and resilience; and*
- *Inclusive, zero carbon and climate resilient economy."*

8.29 Areas for action to meet the objectives and targets include:

- *"Buildings (existing and new);*
- *Renewable energy; and*
- *Green infrastructure and nature-based solutions"*

Guidance documents

IEMA EIA Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance 2nd Edition (IEMA, 2022)

8.30 This guidance is a revision of the 2017 IEMA guidance on Assessing Greenhouse Gas Emissions and Evaluating their Significance. It complements IEMA's latest guidance on Climate Change Resilience and Adaptation (2020) and builds on the Climate Change Mitigation and EIA overarching principles. This guidance states that:

- *"GHG emissions should be assessed and reported as part of a good practice approach to EIA."*

8.31 The guidance provides the following justification for scoping in a GHG emissions assessment:

- *“All projects create GHG emissions that contribute to climate change;*
 - *climate change has the potential to lead to significant environmental effects; and*
 - *there is a GHG emission budget that defines a level of dangerous climate change whereby any GHG emissions within that budget can be considered as significant.”*
- 8.32 One of the major updates in this guidance is that mitigation has taken a much more prominent role within the EIA. It is no longer an element to be considered towards the later stages of the EIA process but should be considered from the outset and throughout the project's lifetime.
- 8.33 The IEMA (2022) guidance document provides information on GHG emissions assessment methodology (e.g., sources of GHG emissions data, spatial scope and temporal scope), as well as guidance on the determination of significance of effects.
- 8.34 This guidance document also states that the following factors should be considered when determining a proportionate approach to the assessment of GHG emissions in EIA:
- *“The type, size, location and temporal scale of the proposed project*
 - *Whether other assessment work has already considered life cycle GHG emissions*
 - *Whether mitigation has already been agreed with the design team, particularly if this is beyond minimum policy requirements*
 - *Whether the proposed project has specific goals or aspirations (e.g. achieving BREEAM certification)”*
- BS EN 15978 Sustainability of Construction Works – Assessment of Environmental Performance and Buildings – Calculation Method (BSI, 2011)
- 8.35 The purpose of this Standard is to provide a consistent framework for the assessment of lifecycle GHG emissions associated with new and existing buildings. This follows a modular approach, breaking down the lifecycle of the development into the product stage, the construction stage, the in-use stage, the End-of-life stage and elements beyond the building lifecycle.
- Royal Institution of Chartered Surveyors (RICS) Whole Life Carbon Assessment for the Built Environment (RICS, 2017)
- 8.36 This aims to harmonise whole life carbon assessment by providing consistency in the interpretation and implementation of the methodology BS EN 15978 to achieve coherent and comparable results that can be used to benchmark whole lifecycle carbon performance of built assets.

UK Green Building Council (UKGBC) Embodied Carbon: Developing a Carbon Brief (UKGBC, 2017)

- 8.37 This is a guide to writing effective briefs for commissioning embodied carbon measurements and holds extensive information on latest applications, standards and tools.

Waste and Resource Action Programme (WRAP) Cutting Embodied Carbon in Construction Projects (WRAP, 2011a)

- 8.38 This guidance helps designers identify basic cost-effective actions to reduce the carbon impact of the materials used in construction projects.

WRAP Procurement Requirements for Carbon Efficiency (WRAP, 2011b)

- 8.39 This guidance is for low-carbon building projects and estates management; to set requirements for “carbon efficiency” (or low-carbon buildings) when procuring design, construction, refurbishment and facilities management services for existing and new buildings.

Greater London Authority Construction Scope 3 (Embodied) Guidance on Greenhouse Gas Accounting and Reporting (GLA, 2013)

- 8.40 Although the proposed development is not in London, this guidance provides information on best practice. This accounting and reporting guidance written for the Greater London Authority contains a series of recommendations which aims to improve the understanding and consistency of the accounting and reporting of embodied emissions within the construction sector from cradle-to-grave. This document provides guidance on how to carry out calculations to measure the embodied carbon impact of buildings.

Mayor of London Whole Life-Cycle Carbon Assessments Guidance (GLA, 2020)

- 8.41 Although the proposed development is not in London, this guidance provides information on best practice. Draft London Plan Policy SI 2 sets out a requirement for developments to calculate and reduce whole lifecycle carbon emissions. Guidance has been published to explain how the assessment of these carbon emissions should be approached and presented.

LETI Embodied Carbon Primer (LETI, 2020)

- 8.42 Although the proposed development is not in London, this guidance provides information on best practice. The Embodied Carbon Primer offers supplementary guidance to the Climate Emergency Design Guide, for those interested in exploring embodied carbon in more detail. There is a current lack of knowledge in the built environment industry surrounding embodied carbon reduction strategies and calculations. Therefore, the London Energy Transformation Initiative has produced this document to support project teams to design buildings that deliver ambitious embodied carbon reductions.

Assessment limitations (technical deficiencies or lack of knowledge)

- 8.43 When calculating GHG emissions associated with the demolition and construction, and operation of the proposed development, carbon benchmarks have been used based on floor area, building use and estimated journey distances. Whilst these benchmarks have given an estimate of the scale of GHG emissions associated with the proposed development, they will not be completely accurate. This is due to variations in geography, construction processes and construction materials used for the proposed development compared to the buildings that the benchmarks are based upon. However, these are considered the best available methods for estimating GHG emissions given the information available. The methods used are considered appropriate for predicting the significance of effects for this topic.

ASSESSMENT METHODOLOGY & SIGNIFICANCE CRITERIA

EIA Scoping

- 8.44 An EIA Scoping Report was submitted to MCC on 18th August 2023 (Appendix 1.1) A formal response was received on 22nd September 2023 (Appendix 1.2). The EIA Scoping Opinion included the following comment from Natural England:

"The ES should identify how the development affects the ability of the natural environment (including habitats, species, and natural processes) to adapt to climate change, including its ability to provide adaptation for people. This should include impacts on the vulnerability or resilience of a natural feature (i.e. what's already there and affected) as well as impacts on how the environment can accommodate change for both nature and people, for example whether the development affects species ability to move and adapt. Nature based solutions, such as providing green infrastructure on-site and in the surrounding area (e.g. to adapt to flooding, drought and heatwave events), habitat creation and peatland restoration, should be considered. The ES should set out the measures that will be adopted to address impacts.

The ES should also identify how the development impacts the natural environment's ability to store and sequester greenhouse gases, in relation to climate change mitigation and the natural environment's contribution to achieving net zero by 2050."

- 8.45 A climate change resilience risk assessment is part B of this chapter. This addresses how the proposed development can be resilient and adapt to climate change and provide adaptation for people. Nature based solutions are addressed within the risk assessment.
- 8.46 GHG emissions associated with carbon sequestration of proposed green infrastructure will be low relative to total GHG emissions over the whole life of the development, therefore the offset benefits will not be quantified. The emissions associated with carbon sequestration of green infrastructure are not considered to be material in quantity to influence the overall significance of effects, and are therefore scoped out of this assessment.

Baseline Study Methodology

- 8.47 The baseline consists of the GHG emissions associated with the current site use. The baseline GHG emissions have then been compared to GHG emissions associated with the proposed development. An assessment period of 60 years is proposed, as per the principles outlined in BS EN 15978. This is based on the typical expected service life of a building. The total estimated GHG emissions will be estimated to 60 years after 2026, the completion year of the proposed development. Therefore, when considering the baseline GHG emissions, it has been assumed that the current buildings and uses would continue to function as they currently do for this time period. This is in order to give a reasonable status quo scenario to assess the proposed development against.

ASSESSMENT APPROACH

- 8.48 There is currently no standard methodology for quantifying GHG emissions within the EIA process. However, best practice will be drawn from the following:

- EIA Guide to Assessing GHG Emissions and Evaluating their Significance (IEMA, 2022);
- Royal Institute of Chartered Surveyors (RICS) Whole Life Carbon Assessment for the Built Environment (2017); and
- BS EN 15978:2011 Sustainability of construction works. Assessment of environmental performance of buildings. Calculation method.

- 8.49 For the purposes of the assessment, the proposed development has been split up into lifecycle stages, as per BS EN 15978 Sustainability of Construction Works - Assessment of Environmental Performance of Buildings - Calculation Method, as shown in Figure 1-1

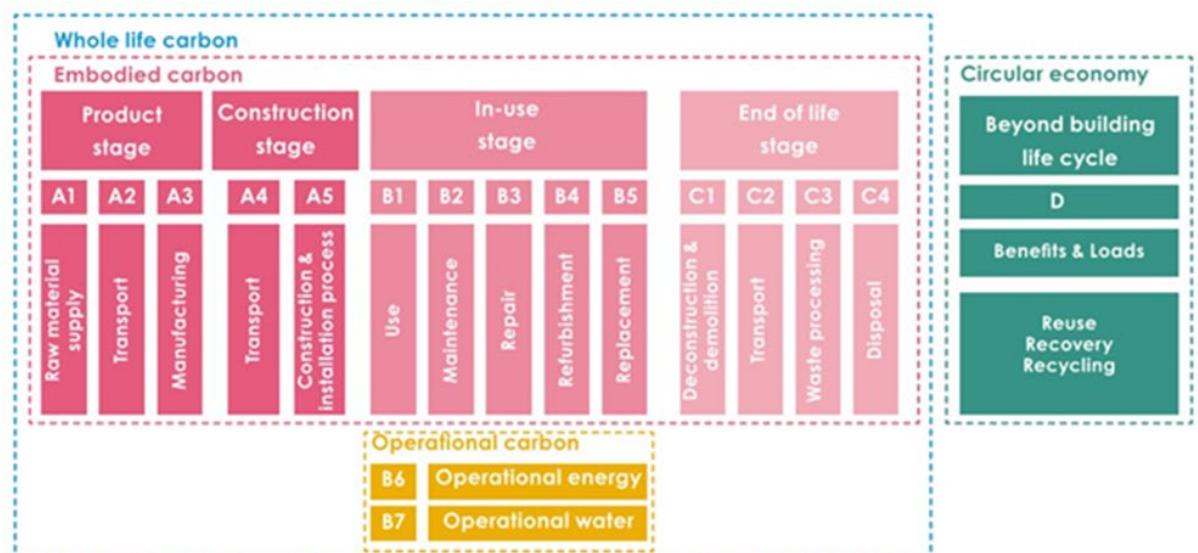


Figure 8-1 Diagram showing the stages of a lifecycle GHG emissions assessment. Diagram taken from the London Energy Transformation Initiative (LETI) (2020) Embodied Carbon Primer, based on lifecycle stages set out in BS EN 15978:2011 Sustainability of Construction Works – Assessment of Environmental Performance of Buildings – Calculation Method.

- 8.50 Where emissions cannot be quantified due to lack of available benchmarks, a qualitative assessment on their likely contribution to significance has been made based on professional judgement.
- 8.51 GHG emissions caused by an activity are often categorised into 'scope 1', 'scope 2' or 'scope 3', following the guidance of the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol suite of guidance documents (WRI and WBCSD, 2014).
- 8.52 The ES chapter does not refer to scope 1, 2 and 3 emissions throughout, instead referring to emissions by lifecycle stage. However, the following section provides an overview of which scope the assessed emissions fall within.
- 8.53 Scope 1 emissions include direct emissions from owner or controlled sources. With respect to the proposed development, this may include emissions from fleet vehicles e.g. heavy goods vehicles (HGVs).
- 8.54 Scope 2 emissions include indirect emissions from purchased energy. With respect to the proposed development this may include electricity, steam, heat or cooling generated offsite, purchased and consumed by the proposed development.
- 8.55 Scope 3 emissions include indirect value chain emissions, resulting from the activities of assets not controlled or owned by the proposed development occurring before or after they have control of an asset. With respect to the proposed development this may include:
- Upstream emissions related to the purchase of required goods and services; and
 - Downstream emissions related to goods leaving the proposed development.

Demolition and Construction

- 8.56 Based on the criteria set out in Figure 8.1, the assessment of the construction phase takes into account the following sources of GHG emissions;
- A1-A3 Product stage: GHG emissions associated with the material extraction, transportation and manufacturing of construction products. These fall within scope 3 emissions; and
 - A4-A5 Construction process stage: GHG emissions associated with product delivery to site and the installation process. These mainly fall within scope 1 and scope 2 emissions.

Operation

- 8.57 Based on the criteria set out in Figure 8.1, the assessment of the operational stage takes into account the following sources of GHG emissions;

- B1-B5 In-use stage: This use stage captures GHG emissions associated with the operation of the built asset over its entire lifecycle, from practical completion to the end of its service life. These fall within scope 3 emissions;
- B6 Operational energy: GHG emissions associated with the estimated total operational energy. These fall within scope 2 emissions;
- B7 Operational water: GHG emissions associated with operational water consumption and foul water. These fall within scope 2 emissions; and
- C1-C4 End of Life Stage: GHG emissions associated with the demolition and disassembly of the proposed development, as well as the exploration of circular economy principles. These mainly fall within scope 1 emissions.

8.58 Additionally, this assessment considers operational transport emissions, which is not included in Figure 8-1. Operational transport emissions are considered due to the significant role these play in the UK's overall GHG emissions. Surface transport is the largest source of GHG emissions in the UK, accounting for 24% of 2019 emissions according to the Committee on Climate Change (2020). This falls within scope 1 and scope 2 emissions.

Sources of GHG emissions excluded from the assessment

8.59 The following sources of GHG emissions have been excluded from the scope of the assessment:

- Operational waste: The opportunities for design and construction decisions to significantly influence the reduction of GHG emissions associated with operational waste are low as it is highly dependent on occupant behaviour and waste processing at the city scale by the Local Authority. The emissions associated with operational waste are not considered to be material in quantity to influence the overall significance of effects, and are therefore scoped out;
- Carbon sequestration of green infrastructure: GHG emissions associated with carbon sequestration of proposed green infrastructure will be low relative to total GHG emissions over the whole life of the proposed development, therefore the offset benefits will not be quantified. The emissions associated with carbon sequestration of green infrastructure are not considered to be material in quantity to influence the overall significance of effects, and are therefore scoped out; and
- Beyond building lifecycle: GHG emissions associated with beyond building lifecycle stage cannot be guaranteed, for example material and component re-use, therefore potential benefits will not be quantified and taken as an offset. The emissions associated with the beyond building lifecycle are not considered to be material in quantity to influence the overall significance of effects, and are therefore scoped out.

ASSESSMENT OF EFFECTS

- 8.60 The scope of the assessment includes the following sources of GHG emissions during the demolition and construction stage :
- GHG emissions associated with site clearance and waste removal;
 - GHG emissions associated with the extraction and manufacturing of building materials (i.e., the product stage); and
 - GHG emissions associated with the transport of materials to the site and construction and installation of products on site (i.e., the construction process stage).
- 8.61 The scope of the assessment includes the following sources of GHG emissions during the operational stage:
- GHG emissions associated with maintenance, repair, replacement and refurbishment within the buildings (i.e., the embodied carbon);
 - GHG emissions associated with the operational energy requirements for the day to day running of the building (i.e., heating, cooling, lighting etc.);
 - GHG emissions associated with operational water consumption for the proposed development;
 - GHG emissions associated with operational transport (i.e., deliveries, staff journeys and occupant journeys). Where appropriate transport figures are available for the proposed development; and
 - GHG emissions associated with End-of-life demolition.

Greenhouse Gas Calculation Methodologies

- 8.62 The metric for assessing the climate change impacts of GHG emissions in this assessment is Global Warming Potential (GWP). This is expressed in units of CO₂ equivalent (CO₂e) over 100 years. This allows for the emissions of the seven key GHG: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF₃) and sulphur hexafluoride (SF₆) expressed in terms of their equivalent global warming potential in mass of CO₂e.

Current baseline

- 8.63 In line with IEMA Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition (2022) (in this document referred to as IEMA (2022) guidance), the current baseline for the proposed development is defined as the current GHG emissions arising from activities within the site boundary for the assessment year (2023).
- 8.64 The site is currently occupied by a single storey, vacant building, referred to as 'the former commercial building'. Baseline emissions associated with the operation of

this building will be estimated as a point of comparison for the baseline section of the ES chapter. This will also be estimated over a 60-year period of the future baseline scenario.

Future baseline

- 8.65 In order to provide a point of comparison for the impact of the proposed development on emissions of GHGs to the global atmosphere over the lifetime of the development (60 years), the emissions of the existing site (baseline) have also been assessed over this timeframe. This approach is in line with the IEMA (2022) guidance.
- 8.66 The future baseline represents the scenario where the proposed development does not go ahead, and the site remains in situ over the lifetime period it would have had.

Demolition and construction stage (lifecycle A1-A5)

- 8.67 Embodied carbon associated with the demolition and construction stage of the proposed development has been estimated by applying appropriate embodied carbon benchmarks based on floor area and the building typologies. Embodied carbon benchmarks have been taken from the Atkins Carbon Critical Tool, WRAP Embodied Carbon Database, the University of Washington Embodied Carbon Benchmark Study and the Building Research Establishment Green Guide. These are considered the best publicly available benchmarks at present. A summary of the assumptions that have been made when calculating estimated GHG emissions can be found in Appendix 8.1.

B1-B5 In-Use stage

- 8.68 Embodied carbon associated with the operational stage of the proposed development has been estimated by applying appropriate embodied carbon benchmarks based on floor area and building typologies. A summary of the assumptions that have been made when calculating estimated GHG emissions can be found in Appendix 8.1.

B6 Operational energy

- 8.69 Based on committed targets, a value of 42,54 kWh/m²/year has been applied to provide an estimate of annual operational energy GHG emissions associated with the proposed development. A summary of the assumptions that have been made when calculating estimated GHG emissions can be found in Appendix 8.1.

B7 Operational water

- 8.70 Estimated water consumption for the residential units has been based on the Building Services Research and Information Association (BSRIA) Rules of Thumb Guidance for Building Services (BSRIA, 2011), which is estimated to be 120 litres per day per person (0.11 cubic metres). The number of occupants on the site as a whole has been calculated from the residential unit allocation in the area schedule.

- 8.71 Estimated water consumption for the commercial portion of the proposed development been based on the Building Services Research and Information Association (BSRIA) Rules of Thumb Guidance for Building Services (BSRIA, 2011). The number of people in the facilities has been based on the figure of 5 m² /person for retail establishments, and an average water consumption, of 7l/day/person has been used to calculate GHG emissions.
- 8.72 Estimated foul water has been assumed to be equal to water consumption.
- 8.73 The BEIS Greenhouse Gas Reporting: Conversion Factors 2023 states that the carbon factor for water supply in the UK is 0.177 kg CO₂e per m³ of water supplied, and is 0.201 kg CO₂e per m³ of water disposed.
- 8.74 A summary of the assumptions that have been made when calculating estimated GHG emissions can be found in Appendix 8.1.

Operational transport

- 8.75 An assessment of GHG emissions associated with operational transport has been carried out for delivery and servicing vehicles arriving at the proposed development.
- 8.76 GHG emissions associated with vehicles travelling to the proposed development have been estimated by applying an emissions factor for average vehicle use, to trip numbers provided by the transport consultant, and a worst-case scenario trip distance figure, estimated by the Department for Transport.
- 8.77 The transport scoping note concluded that the proposed development would generate 64 total daily development traffic flows. As the proposed development is car-free, this comprises service vehicle trips (LGV and HGV) and taxi trips.
- 8.78 As a worst case, it has been assumed that all the modelled trips will be undertaken by HGVs. The BEIS Greenhouse Gas Reporting: Conversion Factors 2023 states that the carbon factor for the average laden HGV is 0.87205 kg CO₂ per km.
- 8.79 A summary of the assumptions that have been made when calculating estimated GHG emissions can be found in Appendix 8.1

C1-C4 End-of-Life stage

- 8.80 GHG emissions associated with the End-of-life stage (lifecycle stage C1-C4) have been estimated by applying appropriate benchmarks based on the proposed floor area and the building typologies.
- 8.81 A summary of the assumptions that have been made when calculating estimated GHG emissions can be found in Appendix 8.1.

Determining Effect Significance

- 8.82 The assessment of the potential impacts and likely effects as a result of the proposed development has taken into account both the demolition/construction phase and the operational phase. In line with the IEMA (2022) guidance, the sensitivity of the receptor (i.e., the global atmosphere) in relation to GHG emissions is always considered to be 'high'. The criteria for determining the significance of effects are outlined in Table 8—3. The significance level attributed to each effect is based on the best practice guidance from IEMA (2022).

Table 8-3 Criteria for determining impact significance

Significance	Descriptor
Major adverse	The proposed development's GHG impacts are not mitigated or are only compliant with do-minimum standards set through regulation, and do not provide further reductions required by existing local and national policy for projects of this type. A project with major adverse effects is locking in emissions and does not make a meaningful contribution to the UK's trajectory towards net zero.
Moderate adverse	The proposed development's GHG impacts are partially mitigated and may partially meet the applicable existing and emerging policy requirements but would not fully contribute to decarbonisation in line with local and national policy goals for projects of this type. A project with moderate adverse effects falls short of fully contributing to the UK's trajectory towards net zero.
Minor adverse	The proposed development's GHG impacts would be fully consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. A project with minor adverse effects is fully in line with measures necessary to achieve the UK's trajectory towards net zero.
Negligible	The proposed development's GHG impacts would be reduced through measures that go well beyond existing and emerging policy and design standards for projects of this type, such that radical decarbonisation or net zero is achieved well before 2050. A project with negligible effects provides GHG performance that is well 'ahead of the curve' for the trajectory towards net zero and has minimal residual emissions.
Beneficial	The proposed development's net GHG impacts are below zero and it causes a reduction in atmospheric GHG concentration, whether directly or indirectly, compared to the without-project baseline. A project with beneficial effects substantially exceeds net zero requirements with a positive climate impact.

8.83 Note that moderate and major effects are considered to be 'significant'.

8.84 Effects can also be described, for example, as:

- Beneficial or adverse;
- Permanent or reversible;
- Short, medium or long term; and
- Significant (moderate or major) or insignificant (negligible or minor).

BASELINE CONDITIONS

Current baseline

8.85 GHG emissions figures are based on the current building occupancy rates, therefore as the building is unoccupied, GHG emissions associated with the building are zero.

Future baseline

8.86 As with the current baseline, GHG emissions associated with the vacant former commercial building will remain zero in the future baseline scenario over a 60-year period.

SENSITIVE RECEPTORS

8.87 The sensitive receptor which has been considered in the assessment is the global atmosphere.

8.88 GHG emissions arising from the demolition/construction and operation of the proposed development are considered the key impacts, with the principal receptor being atmospheric GHG concentrations. The consequence of GHG emissions associated with the proposed development is that atmospheric GHG emissions are pushed closer towards environmental thresholds, triggering subsequent effects on the global climate system.

8.89 Sensitivity is defined by taking into consideration the value, vulnerability and reversibility of the receptor. With regard to global atmospheric GHG concentrations, sensitivity is considered 'high' based on the following conclusions:

- Value of the resource: the atmosphere and its role in regulating the global climate is of high ecological social and economic value and underpins life on the planet therefore is of global critical value;
- Vulnerability: it is recognised by the Paris Agreement (2015) that the GHG concentrations in the atmosphere are already approaching their environmental limit and the effects of climate change are already evident; and

- Reversibility of the effect: climate change is considered irreversible, with a delayed effect in any actions or technologies employed to reduce concentrations of GHG emissions already in the atmosphere.

ASSESSMENT OF EFFECTS

Demolition and Construction Effects

- 8.90 The following commitments are set out by the client to reduce demolition and construction phase GHG emissions in the proposed apartments:
- The utilisation of electricity as an energy source to power construction equipment and machinery
 - Aim to minimise site deliveries
 - Whenever possible, the supply chain will prioritise local sources to reduce transportation distances
 - Cranes and hoists will primarily rely on electric energy sources
 - Off-site manufacturing will be used whenever feasible within the design constraints.
- 8.91 Demolition and construction effects consider GHG emissions associated with the product stage (lifecycle stages A1-A3) and the construction process stage (lifecycle stages A4-A5).
- 8.92 The total estimated cumulative embodied carbon associated with the demolition and construction of the proposed development has been calculated to be between 17,450 – 22,860 tCO₂e. A range of values (i.e., low, medium, and high) have been provided to allow for variations from the benchmarks based on location and material and construction efficiencies. Figure 1-2 provides a summary of the cumulative embodied carbon associated with the demolition and construction phase.

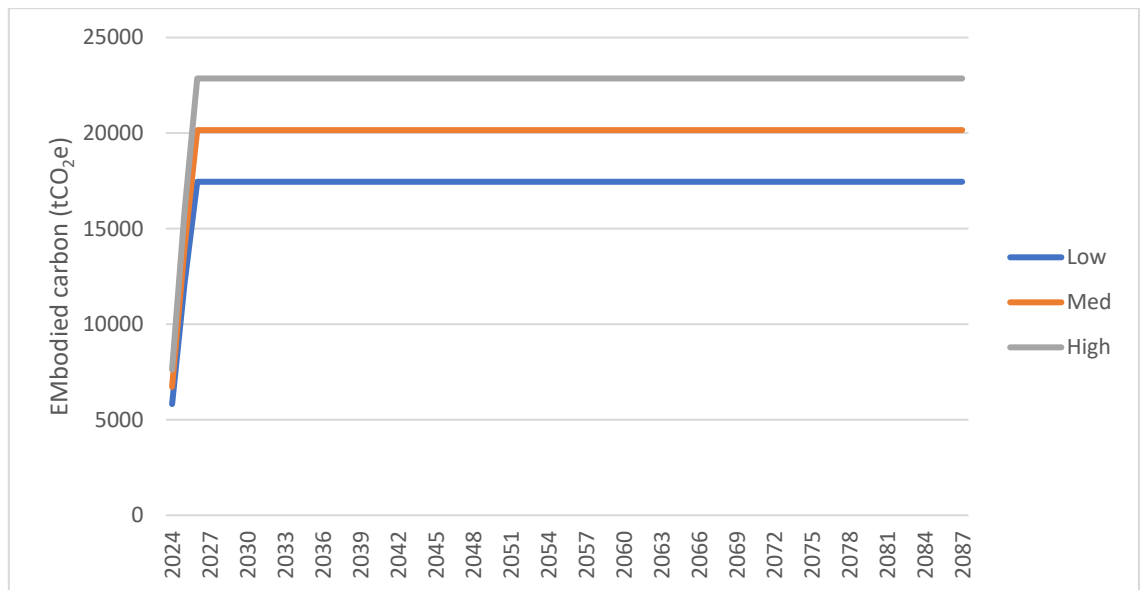


Figure 8-2 graph showing cumulative embodied carbon for the demolition and construction of the proposed development. A range of values (i.e., low, medium, and high) have been provided to allow for variations from the benchmarks applied.

- 8.93 For the worst-case scenario, a total of 17,340 tCO₂e can be attributed to the raw material phase, 4,500 tCO₂e to the construction phase, 1,014 tCO₂e the delivery and transportation phase, and 3 tCO₂e to the demolition phase. The main source of GHG emissions during demolition and construction therefore is the raw material phase.
- 8.94 There are commitments in place to reduce embodied carbon during demolition and construction phase. The sensitivity of the receptor is high, the effects associated with demolition and construction embodied carbon (lifecycle stage A1-A5) stage are minor adverse. Effects are long term.

Intermediate year construction effects

- 8.95 The build out of the proposed development in entirety represents the worst-case scenario for GHG emissions, therefore an assessment of intermediate year construction effects has not been carried out.

Operational effects

- 8.96 Operational effects relate to GHG emissions associated with operational embodied carbon associated with maintenance, repair and replacement (lifecycle stages B1-B5), operational energy consumption (lifecycle stage B6), operational water consumption (lifecycle stage B5) and End-of-life demolition (lifecycle stage C1-C4).
- 8.97 The following commitments are set out in the Energy Statement, to reduce operational phase GHG emissions in the proposed apartments (residential use):
- Natural ventilation supplemented with Mechanical Ventilation with Heat Recovery (MVHR);

- 100% low energy fittings;
 - Electric Panel Heaters;
 - Wifi enabled thermostatic and time controlled Heating System; and
 - A mix of direct hot water cylinders and heat pump hot water cylinders for water heating.
- 8.98 The following commitments are set out in the Energy Statement to reduce operational phase GHG emissions in the non-residential areas:
- Natural Ventilation supplemented with a mix of mechanical and MVHR;
 - 100% low energy fittings;
 - Mix of Electric Panel Heaters, Air Source Heat Pumps (ASHP), and Variable Refrigerant Flow (VRF) heating/cooling;
 - Thermostatic and time controlled Heating System;
 - The use of ASHPs and local electric heaters for water heating; and
 - Photovoltaics to feed into common landlord area.
- 8.99 The following measures are set out in the Transport Statement to reduce emissions associated with operational transport:
- Appropriate levels of cycle parking;
 - Car club street parking space; and
 - Resident Travel Plan.

Operational embodied carbon (lifecycle stage B1-B5)

- 8.100 Embodied carbon associated with the in-use (maintenance) stage has been estimated to be approximately 15,400 tCO₂e over the 60-year lifecycle of the proposed development.
- 8.101 There are commitments in place to reduce operational embodied carbon. The sensitivity of the receptor is high, the effects associated with operational embodied carbon (lifecycle stage B1-B5) stage are major adverse. Effects are long term.

Operational energy consumption (lifecycle stage B6)

- 8.102 Figure 1-3 shows the estimated annual GHG emissions for operational energy associated with the proposed development for a 60-year period from 2026. Relevant BEIS carbon factors have been applied for each year over the 60-year study period. This shows that GHG emissions associated with the proposed development will become less intensive in the future as the electricity grid decarbonises with the phase out of fossil fuels in favour of more renewable energy

sources. Annual GHG emissions associated with operational energy peak at between 70 and 100 tCO₂e/y in 2026 when the proposed development has been built out.

- 8.103 Annual GHG emissions associated with operational energy are then predicted to reduce to between 1 and 2 tCO₂e/y by 2050, which is the year that the BEIS conversion factors stretch to. Beyond 2050, it is assumed that the energy grid will be net zero carbon, in line with the Climate Change Act 2008 (2050 Target Amendment) Order 2019, with any residual GHG emissions being offset at a national scale. A range of values (i.e., low, medium and high) have been provided to allow for variations in energy consumption for building typologies, taking into account factors such as building location, building orientation and building materials used.

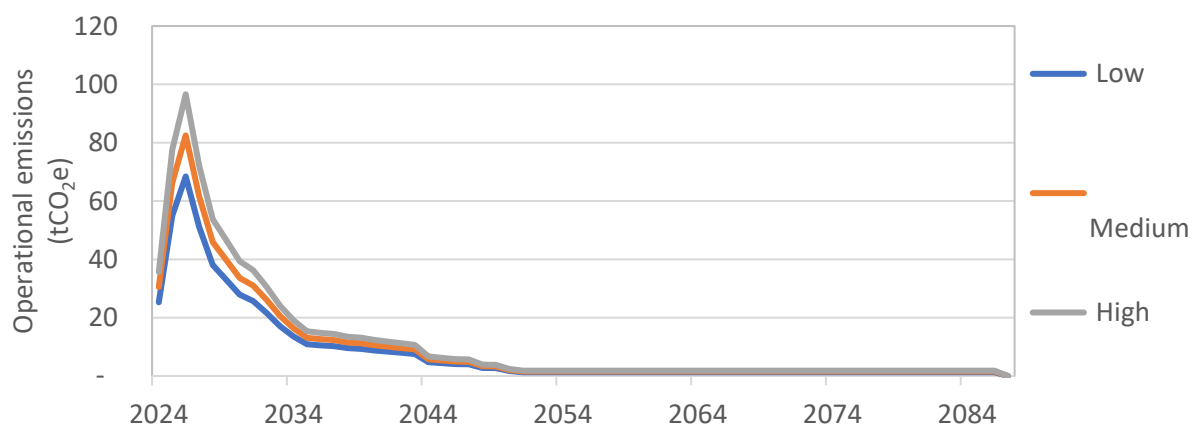


Figure 8-3 Annual GHG emissions associated with operational energy over a 60-year design life. A range of values (i.e., low, medium, and high) have been provided to allow for variations from the benchmarks applied.

- 8.104 Figure 8-4 shows the cumulative GHG emissions associated with operational energy over the 60-year lifecycle of the proposed development. It is predicted that cumulative GHG emissions associated with operational energy will be between 530 and 750 tCO₂e over the 60-year lifecycle of the proposed development.

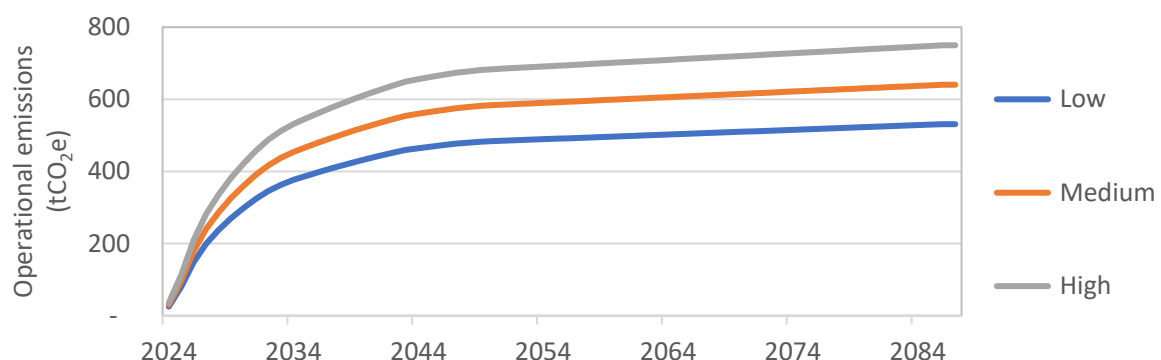


Figure 8-4 Cumulative operational energy GHG emissions over the 60-year design life of the Proposed Development. A range of values (i.e., low, medium, and high) have been provided to allow for variations from the benchmarks applied.

- 8.105 There are commitments in place to reduce operational GHG emissions. These include using 100% low energy fittings, PVs and ASHPs. The sensitivity of the receptor is high, the effects associated with operational energy consumption (lifecycle stage B6) are moderate adverse. Effects are long term.

Operational water (Lifecycle B7)

- 8.106 GHG emissions attributed to water demands for the proposed development over the 60-year lifecycle are summarised in Table 8—4.

Table 8—1 Summary of GHG emissions associated with water consumption for the 60-year design life of the proposed development.

Use class	Water consumption over 60-year lifecycle (m3)	GHG Emissions from water consumption (tCO2e)	GHG Emissions from water disposal (tCO2e)	GHG Emissions (tCO2e)
Residential building	1,127,412	200	225	425
Commercial area	11,880	2	2	4
Total	1,139,292	202	227	429

- 8.107 There are no commitments in place to reduce operational water consumption. The sensitivity of the receptor is high, the effects associated with operational water consumption are major adverse. Effects are long term.

Operational Transport

- 8.108 GHG emissions attributed to the operational transport for the proposed development over the 60-year lifecycle are summarised in Table 8—5.

- 8.109 The figures presented here do take account of the UK Government's target for net zero emissions by 2050, however the electrification of vehicles has not been taken into account up to 2050 to provide an assessment of the worst-case scenario. In reality, with electric vehicles becoming more widespread and the decarbonisation of the grid, it is likely that the numbers here present an overestimation. However, whilst the Government announced the end to sales of new petrol and diesel cars by 2035 on 28 September 2023, existing petrol and diesel cars would still be in circulation until their End of life.

Table 8—2 Summary of GHG emissions associated with operational transport for the 60-year design life of the proposed development

Trip type	GHG emissions (tCO ₂ e) over the 60-year design life of the proposed development
LGVs and HGVs	132,000

- 8.110 There are measures in place to reduce emissions associated with operational transport including a resident travel plan and the provision of car club parking. The sensitivity of the receptor is high, the effects associated with operational water consumption are moderate adverse. Effects are long term.

End-of-life stage (lifecycle stage C1-C4)

- 8.111 GHG emissions associated with the end-of-life stage are estimated to be approximately 45 tCO₂e.
- 8.112 There are no commitments in place to reduce GHG emissions associated with the end-of-life stage. The sensitivity of the receptor is high, the effects associated with the end-of-life stage (lifecycle stage C1-C4) are major adverse. Effects are long term.

WHOLE LIFE SUMMARY

- 8.113 This section of the ES chapter provides a summary of the lifecycle GHG emissions for the proposed development in comparison to the future baseline scenario.
- 8.114 Figure 8-5 shows the lifecycle GHG emissions for the sources that were assessed as part of this ES chapter, thereby considering both the demolition/construction and operation phases of the proposed development. The total GHG emissions for these sources over the 60-year design life of the proposed development are between approximately 165,850 and 171,450 tCO₂e, as outlined in Table 1—6. In comparison, if the proposed development were to not go ahead, estimated GHG emissions associated with the future baseline scenario are assumed to be zero tCO₂e for the lifecycle of the proposed development.

Table 8—3 Whole life carbon summary for the proposed development

Emission source	Low scenario tCO ₂ e	High scenario tCO ₂ e
Construction (A1-A5)	17,450	22,860
In use stage (B1-B5)	15,400	15,400
Operational energy (B6)	530	750
Operational water (B7)	429	429

Operational transport	132,000	132,000
End of life stage (C1-C4)	45	45
Total	165,854	171,484

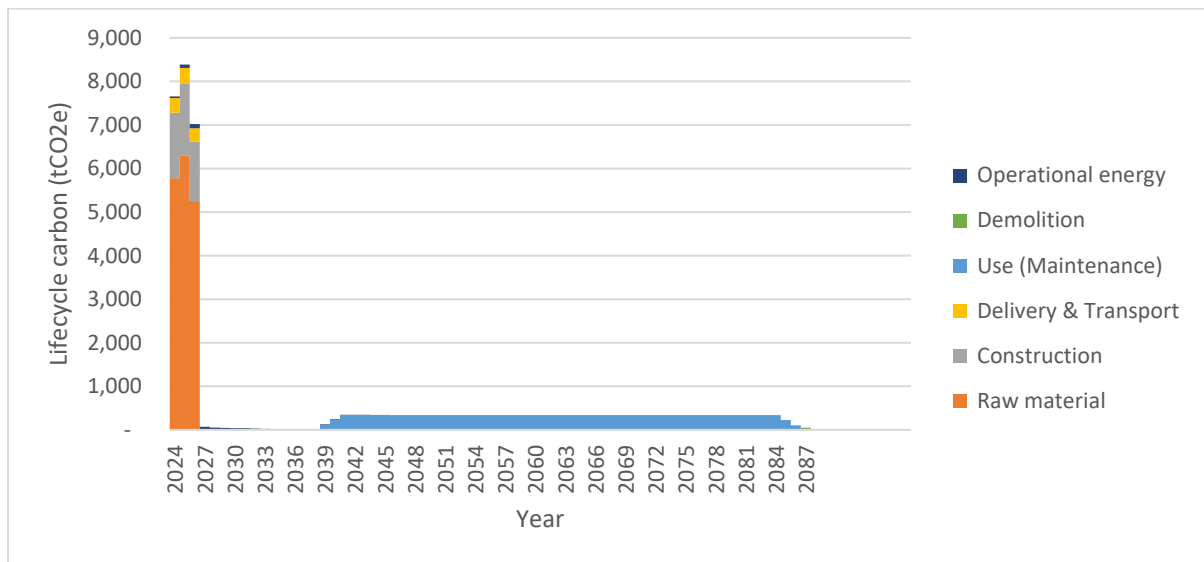


Figure 8-5 Diagram breaking down GHG emissions associated with the proposed development by lifecycle stage. Note: CO₂e contribution from demolition of the existing building is so minor it is not visible in this chart.

8.115 Figure 8-6 breaks down the GHG emissions associated with each lifecycle stage of the proposed development as a proportion of the whole life GHG emissions.

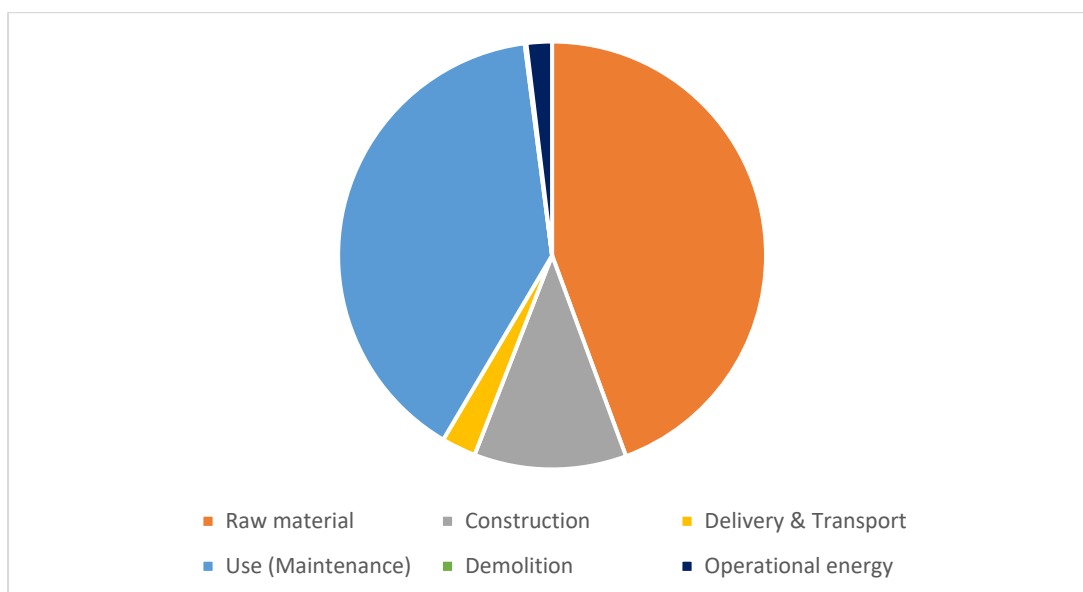


Figure 8-6 Pie chart breaking down the GHG emissions associated with the proposed development by lifecycle stage.

WIDER CONTEXT GHG EMISSIONS

- 8.116 According to 2005 to 2020 UK local regional greenhouse gas emissions data provided by the Department for Business, Energy and Industrial Strategy (BEIS), emissions associated with Manchester for 2020 (the most recent available dataset) were 2,186 kt CO₂e. To gain a sense of scale of the GHG emissions associated with the proposed development, it may be noted that the proposed development represents approximately 0.0046% of Manchester's emissions at the peak of operational emissions in 2026, and approximately 0.000015% during operation post 2050. However, direct comparisons should not be made between these figures because the BEIS GHG emissions figures do not consider 'consumption-based' emissions (i.e. embodied carbon), while the GHG emissions figures for the proposed development do. It is likely that a significant proportion of construction materials will be imported; therefore, it is not a like-for-like comparison. Additionally, due to the global nature of GHG emissions, this point of comparison has not been used to determine significance of effects.

ADDITIONAL MITIGATION AND ENHANCEMENT

Demolition and Construction Phase Supplementary Measures

- 8.117 Table 8—7 provides a summary of the supplementary mitigation measures relating to demolition and construction GHG emissions associated with the proposed development.

Table 8—4 Summary of demolition and construction supplementary mitigation measures

Adverse effect	Mitigation measure	Responsibility / Mechanism for implementation	Timing
Demolition and construction stage GHG emissions (lifecycle A1-A3)	Review embodied carbon associated with the proposed development and put in place a commitment to reduce lifecycle embodied carbon compared to the business as usual baseline. The business as usual baseline is defined as the design of the building using current standard best practice construction materials and techniques. An appropriate baseline should be defined for the project, taking into consideration industry	Developer/contractor	Prior to commencement of development (other than enabling and associated works), within the relevant phase.

Adverse effect	Mitigation measure	Responsibility / Mechanism for implementation	Timing
	benchmarks, such as those set by LETI and RIBA		
Demolition and construction stage GHG emissions (lifecycle A1-A3)	Review opportunities to minimise internal finishes such as dry lining, ceilings and decorative floor screeds / covering where not technically required (e.g. for acoustics or fire protection), opting for fair faced finishes instead.	Architect and Structural Engineer	Prior to commencement of development (other than enabling and associated works), within the relevant phase.
Demolition and construction stage GHG emissions (lifecycle A1-A3)	A whole life carbon assessment should be undertaken for each building to identify opportunities to reduce embodied carbon through design, material specification and construction processes.	Developer	Prior to commencement of development (other than enabling and associated works), within the relevant phase.
Demolition and construction stage GHG emissions (lifecycle A4-A5)	Implement a travel plan for site staff	Contractor to be included as part of the Construction Management Plan	Site enabling works – post appointment of a contractor.

Operational Phase Supplementary Measures

- 8.118 Table 8—8 provides a summary of the supplementary mitigation measures relating to operational GHG emissions associated with the proposed development.

Table 8—5 Summary of operational supplementary mitigation measures

Adverse effect	Mitigation measure	Responsibility / Mechanism for implementation	Timing
In use stage (B1-B5) and End of life stage (C1-C4)	Review embodied carbon associated with the proposed development and put in place a commitment to reduce lifecycle embodied carbon compared to the business as usual baseline. The business as usual baseline is defined as the design	Developer/ contractor	Prior to commencement of development (other than enabling and associated works), within the relevant phase.

Adverse effect	Mitigation measure	Responsibility / Mechanism for implementation	Timing
	of the building using current standard best practice construction materials and techniques. An appropriate baseline should be defined for the project, taking into consideration industry benchmarks, such as those set by LETI and RIBA.		
Operational energy (B6)	Explore the use of passive design measures in order to reduce the need for heating.	Architect	Prior to commencement of development (other than enabling and associated works), within the relevant phase.
Operational energy (B6)	Where any electrical equipment (e.g., oven, white goods etc.) is being installed by the house builder, identify unregulated energy loads and demonstrate reduction through specifying energy efficient equipment.	Developer/ contractor	Prior to commencement of development (other than enabling and associated works), within the relevant phase.
Operational water (B7)	Specify the use of water meters to measure water consumption.	Developer/ contractor	Prior to commencement of development (other than enabling and associated works), within the relevant phase.
Operational water (B7)	Explore the feasibility of specifying rainwater harvesting in order to reduce potable water consumption.	Developer/ contractor	Prior to commencement of development (other than enabling and associated works), within the relevant phase.
Operational water (B7)	Specify landscaping that does not require irrigation in order to reduce unregulated water consumption	Developer	Prior to commencement of development (other than enabling and associated

Adverse effect	Mitigation measure	Responsibility / Mechanism for implementation	Timing
			works), within the relevant phase.
In use stage (B1-B5 and End of life stage (C1-C4)	A whole life carbon assessment should be undertaken for the building to identify opportunities to reduce embodied carbon through design, material specification and construction processes. Consideration should be given for embodied carbon associated with the maintenance and replacement cycle.	Developer	Prior to commencement of development (other than enabling and associated works), within the relevant phase.

CUMULATIVE EFFECTS

- 8.119 Unlike other environmental effects discussed in the ES that have a direct or indirect effect on the site and local area, effects from GHG emissions are not localised but contribute to the global atmospheric concentration of greenhouse gasses and consequently contribute to the global climate change effect. Therefore, assessing emissions from the proposed development in terms of combined effects with other nearby developments is extraneous and immaterial in terms of localised effects, and will not be carried out within this chapter. The proposed development should be viewed, rather, in the context of developments and construction projects globally as it contributes to a global climatic effect. As there are GHG emissions associated with almost all new developments globally and that we are approaching a global climate tipping point, cumulative effects are considered to be significant, but the quantification of the GHG emissions associated with cumulative developments is scoped out of this ES chapter.

SUMMARY & RESIDUAL EFFECTS

- 8.120 Table 8—9 provides a summary of the demolition and construction phase residual effects relating to GHG emissions.

Table 8—6 Summary of residual effects during demolition and construction

Receptor	Effect	Significance before mitigation	Supplementary mitigation	Residual effect significance
The global atmosphere	Embodied carbon associated with	Minor adverse	Review embodied carbon associated with the proposed	Minor adverse

Receptor	Effect	Significance before mitigation	Supplementary mitigation	Residual effect significance
	the product stage (lifecycle stages A1-A3).		development and put in place a commitment to reduce lifecycle embodied carbon compared to the business as usual baseline. The business as usual baseline is defined as the design of the building using current standard best practice construction materials and techniques. An appropriate baseline should be defined for the project, taking into consideration industry benchmarks, such as those set by LETI and RIBA. Review opportunities to minimise internal finishes such as dry lining, ceilings and decorative floor screeds / covering where not technically required (e.g. for acoustics or fire protection), opting for fair faced finishes instead. A whole life carbon assessment should be undertaken for each building to identify opportunities to reduce embodied carbon through design, material	

Receptor	Effect	Significance before mitigation	Supplementary mitigation	Residual effect significance
			specification and construction processes.	
The global atmosphere	Embodied carbon associated with the construction process stage (lifecycle stages A4-A5).	Minor adverse	Implement a travel plan for site staff	Minor adverse

8.121 Table 8.10 provides a summary of the operational phase residual effects relating to GHG emissions.

Table 8.10: Summary of Residual Effects During Operation

Receptor	Effect	Significance before mitigation	Supplementary mitigation	Residual effect significance
The global atmosphere	Embodied carbon associated with the in-use stage for the proposed development (lifecycle stages B1-B5).	Major adverse	Review embodied carbon associated with the proposed development and put in place a commitment to reduce lifecycle embodied carbon compared to the business as usual baseline. The business as usual baseline is defined as the design of the building using current standard best practice construction materials and techniques. An appropriate baseline should be defined for the project, taking into consideration industry benchmarks,	Moderate adverse

Receptor	Effect	Significance before mitigation	Supplementary mitigation	Residual effect significance
			such as those set by LETI and RIBA. A whole life carbon assessment should be undertaken for each building to identify opportunities to reduce embodied carbon through design, material specification and construction processes. Consideration should be given for embodied carbon associated with the maintenance and replacement cycle.	
The global atmosphere	GHG emissions associated with operational energy for the proposed development (lifecycle stage B6).	Moderate adverse	Explore the use of passive design measures in order to reduce the need for heating. Where any electrical equipment (e.g., oven, white goods etc.) is being installed by the house builder, identify unregulated energy loads and demonstrate reduction through specifying energy efficient equipment.	Minor adverse
The global atmosphere	GHG emissions associated with operational water (lifecycle stage B7)	Major adverse	Specify the use of water meters to measure water consumption. Explore the feasibility of specifying rainwater harvesting in order to reduce	Moderate adverse

Receptor	Effect	Significance before mitigation	Supplementary mitigation	Residual effect significance
			potable water consumption. Specify landscaping that does not require irrigation in order to reduce unregulated water consumption	
The global atmosphere	GHG emissions associated with operational transport servicing and delivery trips	Moderate adverse	No mitigation measures are suggested as it is not possible to influence and mitigate emissions arising from delivery and servicing vehicles from external companies.	Moderate adverse
The global atmosphere	GHG emissions associated with the End of life stage (lifecycle stage C1-C5).	Major adverse	Review embodied carbon associated with the proposed development and put in place a commitment to reduce lifecycle embodied carbon compared to the business as usual baseline. The business as usual baseline is defined as the design of the building using current standard best practice construction materials and techniques. An appropriate baseline should be defined for the project, taking into consideration industry benchmarks, such as those set by LETI and RIBA. A whole life carbon assessment should be undertaken for each building to identify	Moderate adverse

Receptor	Effect	Significance before mitigation	Supplementary mitigation	Residual effect significance
			opportunities to reduce embodied carbon through design, material specification and construction processes. Consideration should be given for embodied carbon associated with the maintenance and replacement cycle.	

PART B: CLIMATE CHANGE RESILIENCE RISK ASSESSMENT

INTRODUCTION

8.122 Schedule 4, 5(f) of the Town and Country Planning (EIA) Regulations 2017 notes information should be included in the ES on the likely significant effects of the proposed development on the environment resulting from the vulnerability of the project to climate change.

8.123 In line with the IEMA EIA Guide to Climate Change Resilience and Adaptation (IEMA, 2020), there are two key strands to assessing climate change resilience and adaptation issues within EIA, as outlined below:

- The risks of changes in the climate to the project (i.e. the resilience or conversely the vulnerability of a project to future climate changes). The IEMA (2020) guidance states that this is generally best reported in the analysis of alternatives and it is better suited to a risk assessment type process than traditional EIA 'determination of significance. This climate change resilience risk assessment has therefore been completed for the proposed development; and
- The extent to which climate exacerbates or ameliorates the effects of the project on the environment (i.e. 'in-combination' effects). The IEMA (2020) guidance states that this is best analysed in the existing chapters of the ES and is suited to using traditional significance criteria from the respective chapters. Therefore, this has been included throughout each of the technical chapters and has been completed by each technical specialist.

METHODOLOGY AND ASSESSMENT CRITERIA

Risk assessment

8.124 This climate change resilience risk assessment has been undertaken in line with the IEMA (2020) guidance. The methodology has been adapted from the C40 Cities

Climate Change Risk Assessment Guidance (2018), the Public Infrastructure Engineering Vulnerability Committee (PIEVC) Climate Risk Assessment Methodology (2015) and the Highways England Design Manual for Roads and Bridges Sustainability & Environmental Appraisal. Risk has been assessed based on the probability of an event occurring and severity of consequences as a result of that event occurring.

- 8.125 A baseline risk assessment has been undertaken that assesses the probability and consequence of climatic risks occurring considering current climatic conditions. A second risk assessment has then been undertaken that assess the change in probability and consequence of climatic risks as a result of future climate change.
- 8.126 Probability: Table 2—1 summarises the criteria utilised to determine the likelihood rating for an effect. The project lifetime includes both the construction and operation stages. The project lifetime is considered to be 60 years.

Table 2—7 Criteria used to determine likelihood

Score	Description (probability and frequency of occurrence)
1	The event occurs very rarely during the lifetime of the projects (60 years). For example, once every 60 years (1 event).
2	The event occurs limited number of times during the lifetime of the project (60 years). For example, once every 15 years (4 events).
3	The event occurs regularly during the lifetime of the project (60 years) For example, once every 2-5 years (12-30 events).
4	The event occurs frequently during lifetime of the project (60 years). For example, once per year (60 events).
5	The event occurs very frequently during the lifetime of the project (60 years). For example, multiple times per year (more than 60 events).

- 8.127 Consequence: Table 2—2 summarises the criteria used to determine the consequence rating for effects relating to a climate risk. Consequence has been determined based on the extent to which the climate risk may impact on the amenity value and function of the proposed development. The amenity value is the positive element or elements that contribute to the overall character or enjoyment of the proposed development. The function is the extent to which the proposed development meets the purpose or purposes that it is designed to fulfil (i.e. residential building with commercial space).

Table 2—8 Criteria used to determine consequence

Score	Description (probability and frequency of occurrence)
1	Very low but measurable effect on site users and the proposed development itself. Slight negative change in amenity value of the proposed development and slight negative change in function.
2	Low but measurable effect on site users and the proposed development itself. Low negative change in amenity value of the proposed development and slight negative change in function.

3	Moderate effect on site users and the proposed development itself. Moderate negative change in amenity value of the proposed development and slight negative change in function.
4	Moderate effect on site users and the proposed development itself. Major negative change in amenity value of the proposed development and low negative change in function.
5	Moderate effect on site users and the proposed development itself. Major negative change in amenity value of the proposed development and moderate negative change in function.
6	Major effect on site users and the proposed development itself. Major negative change in amenity value of the proposed development and major negative change in function.
7	Extreme effect on site users and the proposed development itself. Loss of asset.

- 8.128 Risk rating: Table 2—3 summarises the matrix used to determine the risk rating, based on probability of the event occurring and the consequences as a result of the event occurring.

Table 2—9 Risk rating determined based on the likelihood and consequence scores.

Consequence	Probability					
		1	2	3	4	5
	1	1	2	3	4	5
	2	2	4	6	8	10
	3	3	6	9	12	15
	4	4	8	12	16	18
	5	5	10	15	20	25
	6	6	12	18	24	30
	7	7	14	21	28	35

	Low risk
	Medium risk
	High risk

- 8.129 Limitations and assumptions
The main uncertainty regarding the climate change resilience assessment surrounds the climate change projections that the scheme is assessed against. Climate change projections (e.g. UKCP18) are presented using a set of scenarios that capture the relationships between human choices, emissions, concentrations and

temperature change. Some scenarios are consistent with continued dependence on fossil fuels, while others are associated with deliberate actions to reduce GHG emissions. Therefore, climate change projections contain inherent uncertainty, reflecting the uncertainty associated with quantifying human activities (including technological change) and their influence on climate.

LEGISLATION AND POLICY

National legislation and policy

Town and Country Planning (EIA) Regulations 2017 (Stationery Office, 2017)

- 8.130 Schedule 4, 5(f) of the UK EIA Regulations states that the Environmental Statement should include:

'a description of the likely significant effects of the development on the environment resulting from, inter alia... (f) the impact of the project on climate (for example the nature and magnitude of GHG emissions) and the vulnerability of the project to climate change'.

- 8.131 This climate change risk assessment contributes to identifying the likely significant effects on the proposed development resulting from climate change.

National Planning Policy Framework (NPPF) (MHCLG), 2021

- 8.132 Section 14 of the NPPF 2021 focuses on meeting the challenge of climate change, flooding and coastal change. As part of this, new developments should be planned in ways that:

'Avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure.'

UK Climate Change Act 2008 (2050 Target Amendment) (Order 2019)

- 8.133 Section 56 requires the UK Government to undertake a Climate Change Risk Assessment (CCRA) on a five-yearly cycle, with the subsequent development of an adaption programme to deliver resilience against these risks. The Act stipulates that the Government must assess *'the risks for the United Kingdom from the current and predicted impacts of climate change'*.

UK Climate Change Risk Assessment (HM Government, 2022)

- 8.134 The third and most recent UK-wide CCRA was published in 2022. The assessment outlines risks in the eight priority risk areas relating to the following topics:

- Risks to the viability and diversity of terrestrial and freshwater habitats and species from multiple hazards (Priority Risk Area 1);
- Risks to soil health from increased flooding and drought (Priority Risk Area 2);
- Risks to natural carbon stores and sequestration from multiple hazards, leading to increased emissions (Priority Risk Area 3);
- Risks to crops, livestock and commercial trees from multiple climate hazards (Priority Risk Area 4);
- Risks to supply of food, goods and vital services due to climate-related collapse of supply chains and distribution networks (Priority Risk Area 5);
- Risks to people and the economy from climate-related failure of the power system (Priority Risk Area 6);
- Risks to human health, wellbeing and productivity from increased exposure to heat in homes and other buildings (Priority Risk Area 7);
- Multiple risks to the UK from climate change overseas (Priority Risk Area 8); and
- Additional More Action Needed Risks.

The National Adaptation Programme and the Third Strategy for Climate Adaptation Reporting (Defra, 2018)

- 8.135 The second and most recent National Adaptation Programme sets out government's response to the second CCRA, showing the actions government is, and will be, taking to address the risks and opportunities posed by a changing climate. This breaks down the likely risks associated with climate change into the same six categories as those set out in the CCRA, which is outlined above.

Regional and local policy

Places for Everyone, Joint Development Plan Document – Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford, Wigan (Greater Manchester, 2021)

- 8.136 Although this plan is yet to be adopted, the consultation period has finished and it has been submitted to the Secretary of State for Levelling Up, Housing and Communities. The NPPF provides guidance on the weight that should be given to emerging policies, with paragraph 48 stating the following:

- *'Local planning authorities may give weight to relevant policies in emerging plans according to:*
- *The stage and preparation of the emerging plan (the more advanced its preparation, the greater the weight that may be given)'*

- 8.137 The following objective in the joint development plan is of relevance to climate change resilience and adaptation:

Objective 8 – Improve the quality of our natural environment and access to green spaces
‘We will:

- *Enhance special landscapes, green infrastructure, biodiversity and geodiversity;*
- *Improve access to the natural environment and green spaces including parks;*
- *Promote the role of green space in climate resilience and reducing flood risk.’*

8.138 The following policies in the joint development plan are of relevance to climate change resilience and adaptation:

Policy JP-S4 - Resilience

1. *‘Development will be managed so as to increase considerably the capacity of its citizens, communities, businesses and infrastructure to survive, adapt and grow in the face of physical, social, economic and environmental challenges, including climate change. Key measures will include:
Ensuring that developments make appropriate provision for response and evacuation in the case of an emergency or disaster;*
2. *Supporting the retrofitting of existing buildings, infrastructure and places to enhance their resilience;*
3. *Locating critical infrastructure and vulnerable uses away from locations at a high risk of acute shocks;*
4. *Providing adaptable buildings and places that can easily respond to changing needs, future climate impacts and new technologies;*
5. *Designing out opportunities for crime, anti-social behaviour and terrorism;*
6. *Designing indoor and outdoor environments to provide a reduction and respite from more extreme temperatures and winds associated with climate change and greater urbanisation;*
7. *Increasing the size, spread, quality and interconnectedness of the green infrastructure network, enabling the city region, its citizens and wildlife to adapt to changing conditions;*
8. *Taking an integrated catchment-based approach to managing flood risk;*
9. *Maintaining a very high level of economic diversity across Greater Manchester;*
10. *Contributing to the delivery of at least 50,000 additional affordable homes up to 2037;*
11. *Promoting significant enhancements in education, skills and knowledge;*
12. *Supporting healthier lifestyles and minimising potential negative impacts on health including air pollution; and*
13. *Carefully controlling the location of hazardous installations and new development that could be adversely affected by them.’*

Policy JP-S 7 - Resource efficiency

‘The achievement of a circular economy and a zero-waste economy will play a key role in meeting Greater Manchester’s ambition of becoming a leading green city region by 2038. The following measures will help achieve this:

- *Promoting significant enhancements in education, skills and knowledge; 12. Supporting healthier lifestyles and minimising potential negative impacts on health including air pollution; and 13. Carefully controlling the location of*

hazardous installations and new development that could be adversely affected by them.'

Policy JP-S 5 – Flood Risk and the Water Environment

An integrated catchment based approach will be taken to protect the quantity and quality of water bodies and managing flood risk, by:

- 'Returning rivers to a more natural state, where practicable, in line with the North West River Basin Management Plan;
- Working with natural processes and adopting a natural flood management approach to slow the speed of water drainage and intercept water pollutants;
- Locating and designing development so as to minimise the impacts of current and future flood risk, including retrofitting or relocating existing developments, infrastructure and places to increase resilience to flooding;
- Expecting developments to manage surface water runoff through sustainable drainage systems and as close to source as possible (unless demonstrably inappropriate) so as to not exceed greenfield run-off rates or alternative rates specified in district local plans, such as those identified for areas with critical drainage issues.
- Ensuring that sustainable drainage systems:
 - *Are designed to provide multifunctional benefits wherever possible, including for water quality, nature conservation and recreation;*
 - *Avoid adverse impacts on water quality and any possibility of discharging hazardous substances to ground;*
 - *Are delivered in a holistic and integrated manner, including on larger sites split into different phases; and*
 - *Are managed and maintained appropriately to ensure their proper functioning over the lifetime of the development.*
- Securing the remediation of contaminated land and the careful design of developments to minimise the potential for urban diffuse pollution to affect the water environment;
- Securing further investment in wastewater treatment to reduce the frequency of intermittent discharges of storm sewage; and
- Conserving water and maximising water efficiency in new development.'

Policy JP-G 2 – Green Infrastructure Network

'A strategic approach will be taken to the protection, management and enhancement of our Green Infrastructure in order to protect and enhance the ecosystem services which the 'Green Infrastructure Network' provides, including flood management, climate change mitigation and adaptation. Alongside this primary function an enhanced Green Infrastructure network will support wider public health benefits, including promotion of active travel, food growing and recreational opportunities.

The protection, management and enhancement of Green Infrastructure will contribute to the development of a Nature Recovery Network for Greater Manchester.'

Policy JP-G 9 – A Net Enhancement of Biodiversity and Geodiversity

'Across the plan as a whole, a net enhancement of biodiversity resources will be sought, including by:

- Increasing the quality, quantity, extent and diversity of habitats, particularly priority habitats identified in national or local biodiversity action plans and those that support priority species;
- Improving connections between habitats, to protect and enhance the provision of corridors, ecological networks (including Nature Recovery Networks) and stepping stones that enable the movement of species, especially as the climate changes;
- Enhancing the management of existing habitats, including through habitat restoration, avoiding habitat fragmentation and combating invasive species;
- Protecting sites designated for their nature conservation and/or geological importance, with the highest level of protection given to international and then national designations in accordance with legislation and national policy;
- Facilitating greater access to nature, particularly within urban areas;
- Supporting the development and implementation of the Great Manchester Wetlands Nature Recovery Network; and
- Safeguarding, restoring and sustainably managing our most valuable soil resources, tackling soil degradation/erosion and recovering soil fertility, particularly to ensure protection of peat-based soils and safeguard 'best and most versatile' agricultural land.

1.24 Development will be expected to:

- Follow the mitigation hierarchy of:
 - Avoiding harm to biodiversity, particularly where it is irreplaceable, and including consideration of alternative sites where appropriate, then
 - Mitigating (within the local area) any harm to biodiversity, then
 - Compensating (within the local area) for any remaining harm to biodiversity
- Avoid fragmenting or severing connectivity between habitats;
- Achieve a net gain in biodiversity
- Make appropriate provision for long-term management of habitats and geological features connected to the development; and

- Provide robust evidence in accordance with relevant government and other guidance, including field surveys wherever development of 'best and most versatile' agricultural land is proposed or to establish the status of the land within the Agricultural Land Classification system.
- 8.139 Whilst off-site habitat enhancement and creation required as part of the mitigation hierarchy (or to achieve a measurable net gain in biodiversity of no less than 10%) should be local to the site regard should be had to supporting strategic biodiversity priorities and initiatives.'

Manchester's Local Development Framework. Core Strategy Development Plan Document (MCC, 2012)

- 8.140 The Core Strategy was adopted by Manchester City Council on 11th July 2012. It is the key document in Manchester's Local Development Framework and covers a period of 15 years from 2012 to 2017.
- 8.141 The following policies and strategic objectives (SO) are relevant to climate change resilience and adaptation:

Policy JP-S 4 – Resilience

- "Development will be managed so as to increase considerably the capacity of its citizens, communities, businesses and infrastructure to survive, adapt and grow in the face of physical, social, economic and environmental challenges, including climate change. Key measures will include:
 - Ensuring that developments make appropriate provision for the response and evacuation in the case of an emergency or disaster;
 - Providing adaptable buildings and places that can easily respond to changing needs, future climate impacts and new technologies;
 - Designing indoor and outdoor environments to provide a reduction and respite from more extreme temperatures and winds associated with climate change and greater urbanisation;
 - Increasing the size, spread, quality and interconnectedness of the green infrastructure network, enabling the city region, its citizens and wildlife to adapt to changing conditions;
 - Taking an integrated catchment-based approach to managing flood risk."

Policy JP-S 5 – Flood Risk and the Water Environment

- "An integrated catchment based approach will be taken to protect the quantity and quality of water bodies and managing flood risk by:
 - Locating and designing development so as to minimise the impacts of current and future flood risk, including retrofitting or relocating existing developments, infrastructure and places to increase resilience to flooding"

Policy JP-G 2 – Green Infrastructure Network

“A strategic approach will be taken to the protection, management and enhancement of our Green Infrastructure in order to protect and enhance the ecosystem services which the ‘Green Infrastructure Network’ provides, including flood management, climate change mitigation and adaptation.”

The Core Strategy was adopted in July 2012, and includes the following Spatial Objectives (SO) and Policies relevant to climate change resilience and adaptation:

SO 1: Spatial Principles

- *“Provide a framework within which the sustainable development of the City can contribute to halting climate change.*
- *Within the context of mitigation and adaptation to climate change, the framework will guide the scale and distribution of economic, housing, transport, environmental, health, education and other service and infrastructure development across the City.”*

SO 6: Environment

- *“Protect and enhance both the natural and built environment of the City and ensure the sustainable use of natural resources, in order to mitigate and adapt to climate change, support biodiversity and wildlife, improve air, water and land quality, recreational opportunities and provide networks of high quality green infrastructure, ensuring that the City is inclusive and attractive to residents, workers, investors and visitors. “*

Policy EC 1: Employment and Economic Growth in Manchester

- *“Development proposals should have regard to:*
 - *Climate change resilience demonstrating how CO2 emissions will be minimised with an aim of zero carbon emissions, through energy efficiency, renewable energy and contributing to low and zero carbon decentralised energy infrastructure;*
 - *Ensuring design makes the best possible use of a site or building in terms of efficient use of space, enhancing the sense of place of the wider area and minimising detrimental impacts on adjacent uses, considers the needs of users/employees of a site/building for access via walking, cycling and public transport and reduction of opportunities for crime by applying current best practice in security design;*
 - *Flood risk through the Manchester- Salford- Trafford Strategic Flood Risk Assessment (SFRA).”*

Policy C 2: District centres

- *“New development should deliver improvements to the quality and accessibility of the centre environment. Opportunities should be taken to adopt sustainable building design and practises to assist in adapting to climate change.”*

Policy EN 6: Target Framework for CO2 reductions from low or zero carbon energy supplies

- *“Developers will be permitted to use green infrastructure elements such as green roofs, green walls, street trees and waterways to contribute to compliance with CO2 mitigation, subject to the energy statement incorporating evidence such as modelling to demonstrate compliance.”*

Policy EN 8: Adaptation to Climate Change

- *“All new development will be expected to be adaptable to climate change in terms of the design, layout, siting and function of both buildings and associated external spaces. In achieving developments which are adaptable to climate change developers should have regard to the following, although this is not an exhaustive list:*
 - *Minimisation of flood risk by appropriate siting, drainage, and treatment of surface areas to ensure rain water permeability*
 - *Reduction in urban heat island effect through the use of Green Infrastructure such as green roofs, green walls, increased tree cover and waterways*
 - *The need to control overheating of buildings through passive design*
 - *The opportunity to provide linked and diverse green space to enhance natural habitats which will assist species adaptation*
 - *Developers will be permitted to use green infrastructure elements such as green roofs, green walls, street trees and waterways to contribute to compliance with CO2 mitigation under Policy EN6, subject to sufficient evidence to quantify their contribution to compliance.”*

Policy EN 9: Green Infrastructure

- *“New development will be expected to maintain existing green infrastructure in terms of its quantity, quality and multiple function. Where the opportunity arises and in accordance with current Green Infrastructure Strategies the Council will encourage developers to enhance the quality and quantity of green infrastructure, improve the performance of its functions and create and improve linkages to and between areas of green infrastructure. Where the benefits of a proposed development are considered to outweigh the loss of an existing element of green infrastructure, the developer will be required to demonstrate how this loss will be mitigated in terms of quantity, quality, function and future management.*

1.25 *Key features of Manchester's green infrastructure will include:*

- *The continued development of a network of green spaces, water bodies, canals, paths and cycleways, with priority given to those parts of the City where there is an identified existing lack of open space. The Council will seek to protect existing street trees and promote new planting, particularly where this can enhance green links in the urban area.*
- *The continued maintenance and management of the Rivers Mersey and Irwell and their tributaries, for example the River Irk, River Medlock, Chorlton Platt Gore, Gatley Brook, Moston Brook and adjoining land, with regard to their multiple functions including recreation, flood management, and biodiversity.*

- The provision of new, and improvements to the quality and accessibility of existing green infrastructure assets, to mitigate for any loss of green infrastructure as a result of development such as the Metrolink extension programme.
- The encouragement of green roofs, green walls, tree planting and other forms of green infrastructure to allow for the adaption to climate change in heavily urbanised areas.
 - *New green infrastructure provision should be an exemplar of best practice and innovation in terms of both its design and management."*

Policy EN 14: Flood risk

- "In line with the risk-based sequential approach contained within PPS25, development should be directed away from sites at the greatest risk of flooding, and towards sites with little or no risk of flooding; this should take account of all sources of flooding identified in the Manchester-Salford-Trafford Strategic Flood Risk Assessment (SFRA).
- In addition to the requirements for site-specific Flood Risk Assessments (FRAs) set out in PPS25, an appropriate FRA will also be required for all development proposals, including changes of use, on sites greater than 0.5ha within Critical Drainage Areas (CDAs) and Canal Hazard Zones identified in the SFRA.
- All new development should minimise surface water run-off, including through Sustainable Drainage Systems (SUDS) and the appropriate use of Green Infrastructure. Developers should have regard to the surface water run-off rates in the SFRA User Guide. In CDAs, evidence to justify the surface water run-off approach / rates will be required.
- The City of Manchester contains many sections of rivers which are culverted or 'hidden'; where these are indicated in the SFRA beneath the proposed development site, further investigation will be required and the development proposal should take this into account; where feasible and appropriate development should seek to open up culverted/hidden rivers to reduce the associated flood risk and danger of collapse, taking advantage of opportunities to enhance biodiversity and Green Infrastructure."

Policy PA 1: Developer Contributions

- "Where needs arise as a result of development, the Council will seek to secure planning obligations in line with Circular 5/2005, Community Infrastructure Levy regulations or successor regulations/guidance. Through such obligations, the Council may seek contributions for the following with priority assessed on a site by site basis:
 - *Provision of Green Infrastructure including open space*
 - *Protection or enhancement of environmental value*
 - *Climate change mitigation / adaptation"*

Manchester City Council Climate Change Action Plan 2020-2025

8.142 The purpose of the plan is as follows:

- “The document sets out MCC’s commitments to tackling climate change over the next 5 years and builds on previous action plans over the last decade
- It covers MCC’s plans for adapting to the expected impacts of climate change and supporting and influencing others, including through the implementation of the Manchester Green and Blue Infrastructure Strategy 2015-2025”

8.143 Recommended targets and objectives of the plan are as follows:

- “To adapt the city’s buildings, infrastructure and natural environment to the changing climate and to increase the climate resilience of our residents and organisations.
- To improve the health and wellbeing of everyone in Manchester through actions that also contribute to our objectives for CO2 reduction and adaptation and resilience, with particular focus on those most in need.
- To ensure that Manchester establishes an inclusive, zero carbon and climate resilient economy where everyone can benefit from playing an active role in decarbonising and adapting the city to the changing climate.”
- “We recognise that limiting CO2 emissions is not enough. Depending on how successful the world is at reducing emissions, global temperatures by 2100 are likely to rise by between 1.5°C and 4°C above pre-industrial levels. As such, we need to accept that some level of change is inevitable. Climate change is happening now and we need to assess the risks to our communities in order to reduce their vulnerability to these changes. Adopting appropriate mitigation measures will be essential if we are to create resilient communities of the future in Manchester.”

8.144 The plan states the following in relation to adaptation to climate change:

- “Despite the increased international efforts to tackle climate change, we recognise that the world’s climate is already changing and that adaptation is required to protect the city’s people. We are committed to ensuring that climate change adaptation, including green and blue infrastructure, is included in new developments and across Council owned buildings and land.
- Further work needs to be done at a local level through ward plans and neighbourhoods to adapt to make communities more resilient to climate change. This will form part of the Council’s work through Neighbourhoods Teams, Highways and also through the development of improved communication information and guidance.”

8.145 The plan states the following in relation to citywide emissions:

- “The Council also recognises the importance of supporting and influencing our residents and organisations to take action to reduce their direct and indirect CO2 emissions and to adapt to the changing climate.”

1.26 It is stated that the following is included in the 2020-2025 Action Plan:

- “This action plan details the activity that we will undertake over the next five years but also includes activities that will need to be developed and

investigated further in order to ensure that we are on the right path to being zero carbon by 2038. The actions include activities to deliver a reduction in emissions from energy, transport and consumption (mitigation) but also adaptation and promoting investment in nature based solutions and green infrastructure."

Manchester Climate Change Framework 2020-2025

8.146 The Manchester Climate Change Framework 2020-25 is the city's high-level strategy for tackling climate change. It sets out how Manchester will *'play its full part in limiting the impacts of climate change'*, a commitment in the Our Manchester Strategy 2016-25.

8.147 The framework sets the following objectives and targets:

- Staying within our carbon budgets – based on recommendations by the Tyndall Centre for Climate change Research in 2020
- Climate adaptation and resilience
- Health and wellbeing
- Inclusive, zero carbon and climate resilient economy

8.148 The frameworks sets the following areas for action to meet the objectives and targets:

- Buildings (existing and new)
- Green infrastructure and nature-based solutions

Manchester Green and Blue Infrastructure Strategy 2015-2025

8.149 Green and blue infrastructure can provide multiple social economic and environmental benefits.

8.150 Actions of the strategy include the following:

- Investment in river valleys and canals to restore biodiversity value and flood resilience;
- Embed green infrastructure as part of residential and city centre developments; and
- Smaller scale green infrastructure in Central Manchester such as tree planting and community greening have the potential for increasing an areas climate resilience.

Manchester City Council Climate Emergency Declaration (2019)

8.151 Manchester City Council declared a Climate Emergency on 10th July 2019. The council meeting minutes read as follows:

8.152 'This Council notes:

- The serious risks to Manchester's people, of climate change/global heating affecting economic, social and environmental well-being, supply chains – including food security, financial systems and local weather, among many others
- That in 2008 the 'Principles of Tackling Climate Change in Manchester' were agreed as a call to action to engage people from all walks of life in climate change action and, build support for a new way of thinking about climate change.
- That Manchester leads the way, with an agreed Paris compliant carbon budget set in December 2018 and an acceleration of the target for becoming a zero-carbon city by 12 years, setting 2038 as the new target for the city, based on research from the world-renowned Tyndall Centre for Climate Change.
- The recent and welcome upsurge of action by the young people of Manchester, exemplifying the radical traditions of which Manchester is proud.

8.153 This Council agrees (or to the extent that the below concern executive functions, recommends to the Executive) to:

- Declare a Climate Emergency.
- Continue working with partners across Manchester and GMCA to deliver the 2038 target, and determine if an earlier target can be possible, through a transparent and open review. Become carbon neutral by the earliest possible date.
- Encourage involvement in all wards by April 2020 through meetings as part of the Our Manchester strategy, to identify residents and partners who want to be actively involved in achieving the target, with provision for those who cannot attend. Ensure ward plans contain specific, measurable, achievable steps.
- Review all policies, processes and procedures to ensure the council can become carbon neutral. Present an action plan by March 2020 detailing how the city can stay within its carbon budget. Report back regularly to the NESC. Review the corporate plan.
- Work with the Tyndall Centre to review the actual emissions from aviation. Investigate the best way to include aviation in our overall carbon reduction programme in the long term.
- Make climate breakdown and the environment, an integral part of activity throughout the Council, including all decision making, ensuring key decisions take into account the impact on achieving the zero-carbon target and including an environmental impact assessment in all relevant committee reports.
- Ensure that everyone in the council receives carbon literacy training by the end of 2020. Make attendance easier by varying times and length of sessions.
- Encourage all staff on council business to use the lowest carbon, appropriate, travel. Investigate measures to ensure future procurement is carbon neutral.

Increase the percentage of social value with an additional environmental element.

- Work with suppliers to green their supply chains, and support local production.
- Work with training providers to ensure Manchester residents can take on green jobs.
- Investigate and introduce measures to help reach domestic zero carbon levels including addressing fuel poverty and retrofitting existing homes.
- Investigate ways to ensure that future local plans place a mandatory requirement for all new development to be net zero carbon by the earliest possible date.
- Push GMCA to decarbonise public transport, heat and energy as early as possible.
- Through our role on GMPF, encourage divestment in fossil fuels as early as possible.
- Call on the government to:
 - *provide powers and resources to make the zero-carbon target possible including funding for big capital projects*
 - *accelerate the reduction of carbon emissions from aviation*
 - *accelerate the decarbonisation of the electricity grid, funding low carbon energy generation*
 - *ensure that the UK prosperity fund focuses on enable the transition to a low carbon economy.'*

Guidance documents

IEMA EIA Guide to: Climate Change Resilience and Adaptation (IEMA, 2020)

- 8.154 This document acts as a revision to the IEMA guidance on Climate Resilience and Adaptation in EIA (2015) and reflects lessons learnt from emerging practice. It provides a framework for the effective consideration of climate change resilience and adaptation in the EIA process.

ISO 14090:2019 Adaptation to Climate Change – Principles, Requirements and Guidelines (BSI, 2019)

- 8.155 The main purpose of this standard is to provide organisations and projects with a consistent, structured and pragmatic approach to prevent or minimise the harm that climate change could cause and also to take advantage of opportunities.

C40 Cities Climate Change Risk Assessment Guidance (C40 Cities, 2017)

- 8.156 This document aims to provide a concise, easy-to-read guidance, to help cities to develop a climate risk assessment report. It provides the methodology and components of the assessment, as well as providing a comprehensive list of possible effects relating to climate change.

CURRENT BASELINE CONDITIONS

- 8.157 Table 2—4 provides a summary the current baseline climatic conditions, taken from Woodford (Greater Manchester) weather station, to the south of the proposed development. The data provides average historic average climatic conditions for 1991-2020, which is assumed to be representative of the baseline year of the assessment (i.e. 2023). The monthly mean minimum/maximum temperatures are calculated from the average of the daily maximum and daily minimum temperatures for each month. The warmest month on average was July and the coolest month on average was February. The wettest month on average was December and the driest month on average was March. The sunniest month on average was June and the least sunny month on average was January.

Table 2—10 Summary of historic average climatic conditions for 1991-2020 taken from the Woodford (Greater Manchester) Met Office monitoring station.

Month	Mean daily maximum temperature (degrees C)	Mean daily minimum temperature (degrees C)	Days of air frost (days)	Sunshine (hours)	Rainfall (mm)
January	7.11	1.07	8.82	45.09	77.00
February	7.92	1.4	8.44	76.06	60.48
March	10.13	2.42	5.53	103.86	52.53
April	13.01	4.13	2.4	151.19	55.81
May	16.25	7.05	0.28	179.27	56.21
June	18.93	9.55	0	179.53	64.61
July	20.66	11.81	0	157.07	80.19
August	20.24	11.64	0	144.97	79.73
September	17.56	9.51	0.07	137.66	76.09
October	13.84	6.78	1.01	94.7	91.69
November	9.96	3.35	4.11	62.62	77.08
December	7.47	1.15	9.29	53.08	96.98

IDENTIFICATION AND EVALUATION OF BASELINE RISKS

- 8.158 In order to provide a baseline, risks relating to the proposed development have been assessed against current baseline weather patterns (i.e. those set out in section 1.4 of this report). Table 2—5 provides a list of potential risks, as adapted from the C40 Cities Climate Change Risk Assessment Guidance (C40 Cities, 2017). The

inclusion of certain risks in the assessment is based on availability of data and relevance of the risk to the proposed development. Probability and consequence ratings have been given to these risks, thereby generating a risk rating based on Table 2—3. The probability and consequence ratings outlined in Table 2—5 are pre-mitigation.

Table 2—11 Climate change risks based on C40 Cities Climate Change Risk Assessment Guidance

Risk	Is it relevant for the proposed development?	Probability rating (1-5)	Likely consequences of climate risk occurring	Consequence rating (1-7)	Risk rating
Rainstorm	Yes	5	Damage and degradation of building materials through wetting and impact from rainfall. Discomfort for users of the proposed development.	1	5
Monsoon	No	N/A	N/A	N/A	N/A
Heavy snow	Yes	3	Damage to building materials (e.g. roofs). Discomfort and potential injury to users of the proposed development.	2	6
Fog	Yes	5	Increased risk of accidents as a result of impaired vision.	1	5
Hail	Yes	4	Discomfort for users of the proposed development.	1	4
Severe wind	Yes	3	Damage to building materials. Discomfort and potential injury to users of the proposed development.	2	6
Tornado	No	N/A	N/A	N/A	N/A
Hurricane	No	N/A	N/A	N/A	N/A
Extra tropical storm	Yes	3	Damage to building materials. Discomfort and potential injury to users of the proposed development.	4	12
Tropical storm	No	N/A	N/A	N/A	N/A
Storm surge	No	N/A	N/A	N/A	N/A
Lightning	Yes	4	Potential damage to building materials. Injury to users of the	1	4

Risk	Is it relevant for the proposed development?	Probability rating (1-5)	Likely consequences of climate risk occurring	Consequence rating (1-7)	Risk rating
			proposed development unlikely but possible.		
Extreme winter conditions	Yes	4	Damage to building materials (e.g. pipes bursting). Discomfort and potential injury to users of the proposed development.	3	12
Cold wave	Yes	4	Damage to building materials (e.g. pipes bursting). Discomfort and potential injury to users of the proposed development.	3	12
Extreme cold days	Yes	4	Damage to building materials (e.g. pipes bursting). Discomfort and potential injury to users of the proposed development.	3	12
Heat waves	Yes	3	Damage and degradation to building materials. Extended period of overheating in building affects comfort and health of occupants.	5	15
Extreme hot days	Yes	4	Damage and degradation to building materials. Intense overheating in building affects comfort and health of occupants.	4	16
Drought	Yes	3	Potential damage to building foundations in areas with clay soils. Health of flora and fauna on the site affected.	4	12
Forest fire	No	N/A	N/A	N/A	N/A
Land fire	No	N/A	N/A	N/A	N/A
Flash/surface flood	Yes	1	Damage to buildings and contents. Potential injury to	6	6

Risk	Is it relevant for the proposed development?	Probability rating (1-5)	Likely consequences of climate risk occurring	Consequence rating (1-7)	Risk rating
			users of the proposed development.		
River/tidal flood	Yes	1	Damage to buildings and contents. Potential injury to users of the proposed development.	6	6
Groundwater flood	Yes	1	Damage to buildings and contents. Potential injury to users of the proposed development.	6	6
Permanent inundation	No	N/A	N/A	N/A	N/A
Salt water intrusion	No	N/A	N/A	N/A	N/A
Ocean acidification	No	N/A	N/A	N/A	N/A
Landslide	No	N/A	N/A	N/A	N/A
Avalanche	No	N/A	N/A	N/A	N/A
Rock fall	No	N/A	N/A	N/A	N/A
Subsidence	Yes	1	Damage to building materials. Potential injury to users of the proposed development.	6	6
Water-borne disease	Yes	1	Potential illness to users of the proposed development.	3	3
Vector borne disease	Yes	1	Potential illness to users of the proposed development.	4	4
Airborne disease	Yes	1	Potential illness to users of the proposed development.	3	3
Insect infestation	Yes	1	Potential illness to users of the proposed development.	3	3

LIKELY EFFECTS OF CLIMATE CHANGE

- 8.159 The UK Climate Projections 2018 (UKCP18) (Met Office, 2018) provide the most up-to-date assessment of how the climate of the UK may change over the 21st century. UKCP18 uses Representative Concentration Pathways (RCPs). These are named according to the concentration of greenhouse gas modelled to occur in the atmosphere in 2100. There are four RCPs available in the UKCP18 climate projections: RCP 2.6, RCP 4.5, RCP 6.0 and RCP 8.5. In line with the IEMA (2020) guidance, RCP 8.5 has been used, which represents the most conservative, highest-

impact scenario. Table 2—6 summarises the projected summer and winter mean temperature and precipitation changes up to the 2090s for RCP 8.5.

Table 2—12 UKCP18 data for the north west of the UK under RCP 8.5

Season	Variable	Time Period	Projected Change At		
			10 th percentile	50 th percentile	90 th percentile
Winter	Mean temperature (°C)	2020 - 2039	-1 to 0	0 to 1	1 to 2
		2040 - 2059	0 to 1	1 to 2	2 to 3
		2060 - 2079	0 to 1	2 to 3	4 to 5
		2080 - 2099	1 to 2	3 to 4	5 to 6
	Mean precipitation change (%)	2020 - 2039	-10 to 0	0 to 10	10 to 20
		2040 - 2059	-10 to 0	0 to 10	10 to 20
		2060 - 2079	-10 to 0	10 to 20	20 to 30
		2080 - 2099	0 to 10	10 to 20	30 to 40
	Mean daily maximum temp change compared to 1981-2000	2020 - 2039	-1 to 0	0 to 1	1 to 2
		2040 - 2059	0 to 1	1 to 2	2 to 3
		2060 - 2079	0 to 1	2 to 3	4 to 5
		2080 - 2099	1 to 2	3 to 4	5 to 6
	Mean daily minimum temp change compared to 1981-2000	2020 - 2039	-1 to 0	0 to 1	1 to 2
		2040 - 2059	0 to 1	1 to 2	2 to 3
		2060 - 2079	0 to 1	2 to 3	4 to 5
		2080 - 2099	1 to 2	3 to 4	5 to 6
Summer	Mean temperature (°C)	2020 - 2039	0 to 1	1 to 2	1 to 2
		2040 - 2059	0 to 1	1 to 2	3 to 4
		2060 - 2079	0 to 1	3 to 4	5 to 6
		2080 - 2099	1 to 2	4 to 5	7 to 8
	Mean precipitation change (%)	2020 - 2039	-30 to -20	-10 to 0	10 to 20
		2040 - 2059	-40 to -30	-20 to -10	0 to 10
		2060 - 2079	-60 to -50	-30 to -20	-10 to 0
		2080 - 2099	-70 to -60	-40 to -30	-10 to 0
	Mean daily maximum temp change compared to 1981-2000	2020 - 2039	0 to 1	1 to 2	2 to 3
		2040 - 2059	0 to 1	2 to 3	4 to 5
		2060 - 2079	0 to 1	3 to 4	6 to 7
		2080 - 2099	1 to 2	5 to 6	8+
	Mean daily minimum temp change compared to 1981-2000	2020 - 2039	0 to 1	0 to 1	1 to 2
		2040 - 2059	0 to 1	1 to 2	2 to 3
		2060 - 2079	1 to 2	2 to 3	4 to 5
		2080 - 2099	1 to 2	4 to 5	5 to 6

8.160 According to UKCP18 data, over land the projected general trends of climate changes in the 21st century are similar to UKCP09, with a move towards warmer, wetter winters and hotter, drier summers. However, natural variations mean that some cold winters, some dry winters, some cool summers and some wet summers will still occur.

Temperature

8.161 UKCP18 projections show that there is more warming in the summer than in the winter.

Precipitation

8.162 Rainfall patterns across the UK are not uniform and vary on seasonal and regional scales and will continue to vary in the future. While UKCP18 projections show a clear shift to higher probability levels of dry summers, they also suggest that the likelihood

of individual wet summers reduces only slightly. The risk of heavy rainfall events is likely to increase.

Sea level rise

- 8.163 According to UKCP18 projections, global sea level has risen over the 20th century and will continue to rise over the coming centuries. The amount of sea level rise depends on the location around the UK and increases with higher emissions scenarios. Sea level rise over the coming centuries may affect tidal characteristics substantially (including tidal range).

Snow

- 8.164 According to UKCP18 projections, for the period 2061-2080, under a high emissions scenario (RCP8.5), the regional (12km) and local (2.2km) projections show a decrease in both falling and lying snow across the UK relative to the 1981-2000 baseline.

Wind

- 8.165 There are no compelling trends in storminess, as determined by maximum gust speeds, from the UK wind network over the last four decades. UKCP18 projections over the UK show an increase in near surface wind speeds over the UK for the second half of the 21st century for the winter season when more significant effects of wind are experienced. This is accompanied by an increase in frequency of winter storms over the UK. However, the increase in wind speeds is modest compared to interannual variability.
- 8.166 Winds associated with major storm events can be some of the most damaging and disruptive events for the UK with implications for property, power networks, road and rail transport and aviation.

IDENTIFICATION AND EVALUATION OF RISKS WITH CLIMATE CHANGE

- 8.167 Table 2—7 provides a summary of how the identified climate risks are likely to change in the future as a result of climate change. Probability and consequence ratings have been given to these risks, thereby generating a risk rating based on Table 2—3. The probability and consequence ratings outlined in Table 2—7 are pre-mitigation.

Table 2—13 Climate change risks based on C40 Cities Climate Change Risk Assessment Guidance

Risk	Baseline rating	Change in probability as a result of climate change	Probability rating (1-5)	Consequence rating (1-7)	Risk rating with climate change	Mitigation needed?
Rainstorm	5	The frequency of precipitation is likely to decrease, particularly in the summer. However, the risk of heavy rainfall events is likely to increase.	5	1	5	No
Heavy snow	6	The frequency of heavy snow	2	2	4	No

Risk	Baseline rating	Change in probability as a result of climate change	Probability rating (1-5)	Consequence rating (1-7)	Risk rating with climate change	Mitigation needed?
		events is likely to decrease.				
Fog	5	It is unknown how climate change will affect the frequency of fog.	5	1	5	No
Hail	4	The frequency of hailstorms is likely to increase.	5	1	5	No
Severe wind	6	The frequency of severe wind and storms is likely to remain similar.	3	2	6	No
Extra tropical storm	12	The frequency of severe wind and storms is likely to remain similar.	3	4	12	Yes
Lightning	4	The frequency of lightning storms is likely to remain similar.	4	1	4	No
Extreme winter conditions	12	The frequency of extreme winter conditions is likely to decrease.	2	3	6	No
Cold wave	12	The frequency of cold waves is likely to decrease.	2	3	6	No
Extreme cold days	12	The frequency of extreme cold days is likely to decrease.	2	3	6	No
Heat waves	15	The frequency of heat waves is likely to increase.	4	5	20	Yes
Extreme hot days	16	The frequency of extreme hot days is likely to increase.	5	4	20	Yes
Drought	12	The frequency of drought is likely to increase.	4	4	16	Yes
Flash/surface flood	6	The frequency of flash/surface flooding is likely to increase.	2	6	12	Yes
River/tidal flood	6	The frequency of river/tidal flooding is likely to increase.	1	6	12	Yes
Groundwater flood	6	The frequency of groundwater flooding is likely to remain at a similar level.	1	6	6	Yes
Subsidence	6	The frequency of subsidence is likely to remain low.	1	6	6	No
Water-borne disease	3	The frequency of water-borne disease is likely to increase but remain low.	2	3	6	No

Risk	Baseline rating	Change in probability as a result of climate change	Probability rating (1-5)	Consequence rating (1-7)	Risk rating with climate change	Mitigation needed?
Vector borne disease	4	The frequency of vector-borne disease is likely to increase but remain low.	1	4	4	No
Air-borne disease	3	The frequency of air-borne disease is likely to increase but remain low.	2	3	6	No
Insect infestation	3	The frequency of insect infestation is likely to increase but remain low.	2	3	6	No

INCREASING THE RESILIENCE OF THE PROPOSED DEVELOPMENT TO CLIMATE CHANGE

- 8.168 Table 2—8 summaries the mitigation measures that have been put in place or that should be reviewed at the future design stages for the proposed development that will increase resilience to the likely effects resulting from climate change. These particularly focus on the effects that scored highly in the risk assessment in Table 2—7.

Table 2—14 Climate change resilience measures

Risk	Mitigation measure
Extreme tropical storm	The structural design of the building will be resilient to high wind. A wind desktop study has been undertaken for the proposed development. A Flood Risk Assessment and Drainage Strategy report has been developed for the proposed development that considers the effects of climate change.
Heat waves	The landscaping strategy is to include trees to provide shade during hot periods, thereby improving external comfort. The design (e.g. window sizes and location) and orientation of the building will regulate interior temperatures during hot periods. Where possible, lighter colours should be used on buildings and hard landscaping to reduce the albedo of surfaces.
Extreme hot days	

Risk	Mitigation measure
Drought	The landscaping strategy is to include drought resilient planting that isn't reliant on irrigation. Buildings should be fitted with low flow sanitaryware to reduce water consumption. Where possible, grey and rainwater harvesting should be utilised. Resilient planting should be used to minimise the need for irrigation, therefore helping with water scarcity.
Flash/surface flood	A Flood Risk Assessment and Drainage Strategy considering climate change have been developed for the proposed development.
River/tidal flood	
Groundwater flood	
Water-borne disease	Appropriate ventilation strategy to be captured within the design.
Vector-borne disease	Consideration of insects and rodents in the waste management strategy is a standard consideration within the design.
Airborne disease	
All risks	Since the effects of climate change are dynamic and constantly changing, an adaptive management approach is recommended.

RESIDUAL EFFECTS

- 8.169 Table 2—9 provides a summary of the residual effects of climate change on the proposed development. Mitigation measures outlined in Table 2—8 have been taken into account.

Table 2—15 Summary of residual risks ratings based on probability and consequence taking into account mitigation measures

Risk	Probability rating (1-5)	Consequence rating (1-7)	Risk rating
Rainstorm	5	1	5
Heavy snow	2	2	4
Fog	5	1	5

Risk	Probability rating (1-5)	Consequence rating (1-7)	Risk rating
Hail	5	1	5
Severe wind	3	2	6
Extra tropical storm	3	3	9
Lightning	4	1	4
Extreme winter conditions	2	3	6
Cold wave	2	3	6
Extreme cold days	2	3	6
Heat waves	4	4	16
Extreme hot days	5	3	15
Drought	4	3	12
Flash/surface flood	2	5	10
River flood	4	5	10
Groundwater flood	1	6	6
Subsidence	1	6	6
Water-borne disease	2	3	6
Vector borne disease	1	4	4
Air-borne disease	2	3	6
Insect infestation	2	3	6

REFERENCES

- Atkins (2010) Masterplanning Tool;
- British Standards Institution (BSI) (2011) BS EN 15978:2011 Sustainability of Construction Works – Assessment of Environmental Performance of Buildings – Calculation Method;
- British Standards Institution (BSI) (2019) ISO 14090:2019 Adaptation to Climate Change – Principles, Requirements and Guidance;
- Building Research Establishment (BRE) (2009) The Green Guide to Specification, 4th Edition;
- Building Services Research and Information Associated (BSRIA) (2011). Rules of Thumb Guidance for Building Services;
- C40 Cities (2017) Climate Change Risk Assessment Guidance;
- Chartered Institution of Building Services Engineers (CIBSE) TM46 for Office (CIBSE, 2008);
- Department for Business, Energy & Industrial Strategy (2022). UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2020. Available at: <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-greenhouse-gas-emissions-national-statistics-2005-to-2020>;
- Department for Business, Energy and Industrial Strategy. (2022). Greenhouse Gas Reporting: Conversion Factors 2022;

- Department for Business, Energy and Industrial Strategy. (2023). Greenhouse Gas Reporting: Conversion Factors 2023;
- Department for Environment, Food and Rural Affairs (DEFRA) (2018) The National Adaptation Programme and the Third Strategy for Climate Adaptation Reporting;
- Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2023) Conservation of fuel and power: Approved Document L;
- Department for Transport (2018) Domestic Road Freight Statistics. Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/815839/domestic-road-freight-statistics-2018.pdf;
- Greater London Authority Construction Scope 3 (Embodied) Guidance on Greenhouse Gas Accounting and Reporting (GLA, 2013);
- Greater Manchester (2021). Places for everyone. Joint Development Plan Document – Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford, Wigan;
- Greater Manchester Combined Authority (GCMA) (2021) Places for Everyone, Joint Development Plan – Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford, Wigan. Publication Stage;
- Highways England. Design Manual for Roads and Bridges Sustainability & Environmental Appraisal;
- HM Government (2022) UK Climate Change Risk Assessment;
- Institute of Environmental Management and Assessment (IEMA) (2020) Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation;
- Intergovernmental Panel on Climate Change (IPCC) (2018) Global Warming of 1.5 °C Special Report;
- London Energy Transformation Initiative (LETI). (2020) Embodied Carbon Primer;
- Manchester City Council (2012). Manchester's Local Development Framework, Core Strategy Development Plan Document, Adopted 11th July 2012;
- Manchester City Council (2015). Manchester's Great Outdoors, a Green and Blue Infrastructure Strategy for Manchester. Available at: https://www.manchester.gov.uk/downloads/download/6314/manchester_green_and_blue_strategy;
- Manchester City Council (2019). Minutes of the meeting held on Wednesday, 10 July 2019. Available at: <https://democracy.manchester.gov.uk/documents/g524/Printed%20minutes%2010th-Jul-2019%2010.00%20Council.pdf?T=1>;
- Manchester City Council Climate Change Action Plan 2020-2025. Available at: <https://democracy.manchester.gov.uk/documents/s16275/Final%20MCC%20Climate%20Change%20Action%20Plan%202020-25.pdf>;

- Manchester Climate Change Agency (2020). Manchester Climate Change Framework 2020-25. Available at: <https://www.manchesterclimate.com/framework-2020-25>;
- Manchester Climate Change Partnership and Manchester Climate Change Agency. (2020). Manchester Climate Change Framework 2020-2025;
- Mayor of London (2020). Whole Life-Cycle Carbon Assessment Guidance;
- Met Office (2018) UK Climate Projections 2018 (UKCP18);
- Met Office (2020) UK Climate Averages;
- Ministry for Housing, Community and Local Government (MHCLG) (2019) National Planning Policy Framework;
- Ministry for Housing, Community and Local Government (MHCLG) (2017) National Planning Practice Guidance;
- Ministry of Housing, Communities & Local Government (MHCLG). (2021). Planning Practice Guidance (PPG);
- Royal Institution of Chartered Surveyors (RICS). (2014). Methodology to Calculate Embodied Carbon;
- The institute of Environmental Management and Assessment (IEMA) Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition (2022);
- The Stationery Office (2017) Town and Country Planning (EIA) Regulations 2017.
- Town and Country Planning (EIA) Regulations 2017 (as amended, 2018);
- UK Climate Change Act 2008 (2050 Target Amendment) (Order 2019);
- UK Green Building Council (UKGBC) Embodied Carbon: Developing a Carbon Brief (UKGBC, 2017);
- University of Washington, (2017). Embodied Carbon Benchmark Study. Available at: <https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/38017/CLF%20Embodied%20Carbon%20Benchmark%20Study.pdf>;
- Waste and Resource Action Programme (WRAP). (2011a). Procurement Requirements for Carbon Efficiency;
- Waste and Resource Action Programme (WRAP). (2018) Embodied Carbon Database; and
- World Resources Institute (WRI) (2004) The Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard.

9. BUILT HERITAGE

INTRODUCTION

- 9.1 This chapter assesses the likely significant effects of the Proposed Development on the built historic environment. As there are no heritage assets within the Site boundary, this chapter addresses the potential indirect effect of the Proposed Development on heritage assets in the setting of the Site.
- 9.2 The chapter describes the methods used to assess the likely significant effects, the baseline conditions currently existing at the Site and in its surroundings, the potential indirect effects of the Proposed Development upon the built historic environment arising from the construction and the operational phase. The chapter will also identify the mitigation measures required to prevent, reduce, or offset any identified effects. It has been written by Stephen Levrant Heritage Architecture Ltd (SLHA).
- 9.3 This chapter is supported by a detailed Heritage Statement (please refer to **Appendix 9.1**) which provides a detailed baseline appraisal and Heritage Impact Assessment. This chapter summarises the findings of the Heritage Statement and is cross-referred to throughout.

RELEVANT LEGISLATION & GUIDANCE

- 9.4 The following planning policy and legislation has been considered within this scoping exercise and will be taken forward for the Townscape and Visual Impact Assessment within the EIA:
- Planning (Listed Buildings and Conservation Areas) Act 1990
 - National Planning Policy Framework ('NPPF'), July 2021
 - Planning Practice Guidance ('PPG'), live on-line resource
 - Manchester's Local Development Framework, Core Strategy, July 2012
 - Saved Policies of Manchester Extant Unitary Development Policies ('UDP'), July 1995
- 9.5 The following guidance from Historic England has informed both the baseline appraisal and impact assessment:
- Historic England, Conservation Principles. Policies and Guidance (2008).
 - Historic England, The Setting of Heritage Assets (2017).

- Historic England, Historic Environment Good Practice Advice in Planning. Note 2: Decision-Taking in the Historic Environment, (2015).
- Historic England, Statements of Heritage Significance (2019).
- Historic England, Tall Building: Advice Note 4 (March 2022).

ASSESSMENT METHODOLOGY & SIGNIFICANCE CRITERIA

Baseline Assessment

- 9.6 The baseline assessment was undertaken using a combination of desk-based study, research and fieldwork to identify and assess the heritage significance of the designated and non-designated heritage assets (referred to as 'receptors'). It also established the way in which the settings and the Site contribute to the heritage significance of these assets.
- 9.7 The above receptors are valued and the impact on them assessed giving a significance of effect. Individual viewpoints from which to undertake the Visual Impact Assessment were determined following site inspection and discussion with Manchester City Council.
- 9.8 In order to predict the magnitude of impact and the overarching effect, the following criteria is considered:
- The sensitivity and proximity of receptors;
 - The nature of existing views;
 - The degree of change to views and visibility of the Proposed Development; and
 - The availability and amenity of alternative views.

Assessment Methodology

- 9.9 The assessment methodology for the Baseline Appraisal and Heritage Impact Assessment is a synthesis of established guidance, best practice and professional judgement. In accordance with an adapted form of the methodology set out in the Department for Transport's Design Manual for Roads and Bridges (DMRB) Volume 11 Section 3 Part 2 Cultural Heritage HA 208/07, all receptors identified in the baseline which might be affected by the Proposed Development are valued and the impact on them is assessed in order to give a significance of effect. The following guidance has also been utilised for the assessment:
- DCMS's Principles of Selection for Listing Buildings (2010);

- Historic England's Conservation Principles, Policies and Guidance (2008);
- Historic England's Good Practice Advice Note 3: The Setting of Heritage Assets (2017); and
- Historic England's Good Practice Advice Note 4: Tall Buildings (2022).

9.10 The aim of this assessment has been:

- To establish the baseline environment regarding designated and non-designated heritage assets i.e. Listed Buildings, Conservation Areas, and Non-Designated Heritage Assets.
- Assessment of the significance of the asset.
- Evaluation of the magnitude of impacts on identified assets.
- Identification of mitigation in the form of further surveys, investigation and recording to be undertaken in light of the identified impacts.

9.11 Identification and description of the baseline environment has involved a combination of desk-based review of plans, maps, records and other documents, and visual survey (undertaken by SLHA, September 2023).

9.12 Consideration has also been given to the historical development, non-designated heritage assets, building types and materials, key views to the notable historic buildings which contribute to the identification of the built form, and understanding of the special interest of the area.

9.13 The selection of key views for the Heritage and Visual Impact Assessment took into account the following factors regarding character and distinctiveness of the area surrounding the Site: open spaces, public realm, materials, views into and from the Site, current and historic uses and the urban grain.

9.14 Information was collated from a number of online and primary sources including:

- The National Heritage List (Historic England).
- Manchester City Council Website.
- Manchester University Library website.

Identification of the Study Area

- 9.15 For the purposes of this assessment, consideration has been given within a 500m radius of the Site. The study area provides a focus for assessment but is not intended to be prescriptive; buildings outside the boundary of the study area are considered where relevant.
- 9.16 A Zone of Theoretical Visibility covers a wider area and has been utilised for the purposes of the Heritage and Visual Impact Assessment to identify key views.

Construction Phase

- 9.17 The construction phase assessment has considered the potential for change in the setting of listed buildings, conservation areas, and non-designated heritage assets in the vicinity of the Proposed Development.

Operational Phase

- 9.18 The assessment methodology and approach to the relative impact on heritage assets during the operational phase is based on evidence-based assumptions in relation to material changes in the setting of listed buildings, conservation areas, and non-designated heritage assets in the vicinity of the Proposed Development.

Significance Criteria

- 9.19 Criteria have been established to appraise a heritage asset's significance. Statutory criteria, as set out in the 'Principles of Selection for Listing Buildings', DCMS, 2010 (revised 2018), provides a list of principles of assessing significance based on architectural and historic interest, age and rarity, aesthetic merits, selectivity and national interest. Historic England (formerly English Heritage)'s criteria outlined in 'Conservation Principles, Policies and Guidance,' (2008) are also considered in this assessment.
- 9.20 Evaluation of significance has been informed primarily by the designation of the assets at an international, national, regional or local level as well as their ability to contribute to an understanding of the past. This value rating had also been applied when considering sensitivity of views containing heritage assets. Indicative definitions for each of these ratings are outlined in Table 9.1:

Table 9.1 – Significance Criteria for Determining the Value of Heritage Assets	
Significance	Definition
High	Grade I and Grade II* listed buildings. Other buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the listing grade. Conservation Areas containing very important buildings.

Medium	Grade II listed buildings. Historic buildings that can be shown to have exceptional qualities in their fabric or historical associations. Conservation areas containing buildings that contribute significantly to its historic character.
Low	Locally listed buildings. Historic buildings of modest quality in their fabric or historical association.

Assessment of Effects and Evaluation of the Magnitude of Impact

- 1.27 Impacts may be beneficial, adverse or neutral. If the Proposed Development will enhance heritage values or the ability to appreciate them, then the impact on heritage significance will be deemed to be beneficial; however, if they fail to sustain heritage values or impair their appreciation then the impact will be deemed to be adverse. Where a development will not intrude on the significance of a heritage asset, the impact will be deemed neutral.
- 1.28 Table 9.2 summarises the factors to be taken into account when assessing the magnitude of impact. The criteria are not intended to be prescriptive and the weighting to be accorded to each requires professional judgement.

Table 9.2 – Criteria for Determining Magnitude of Impact	
Magnitude of impact	Criteria for assessing impact
Major beneficial	The development considerably enhances the heritage values of the heritage assets, or the ability to appreciate those values.
Moderate beneficial	The development enhances to a clearly discernible extent the heritage values of the heritage assets, or the ability to appreciate those values.
Minor beneficial	The development enhances to a minor extent the heritage values of the heritage assets, or the ability to appreciate those values.
Negligible beneficial	The development would imperceptibly enhance the intrinsic values of the identified heritage assets, or the experience and appreciation of the buildings or the designated area.

Neutral	The development may result in some visual change but does not affect the heritage values of the heritage assets in the view, or the ability to appreciate those values.
Negligible adverse	The development would alter, but not diminish, the intrinsic values of the identified heritage assets, or the experience and appreciation of the buildings or the designated area to any appreciable degree.
Minor adverse	The development erodes to a minor extent the heritage values of the heritage assets, or the ability to appreciate those values.
Moderate adverse	The development erodes to a clearly discernible extent the heritage values of the heritage assets, or the ability to appreciate those values.
Major adverse	The development severely erodes the heritage values of the heritage assets, or the ability to appreciate those values.

Significance of Effect

- 1.29 Derived by combining the significance rating of the resource with the magnitude of impact for each asset, Table 9.3 illustrates how information on the significance of the asset and the magnitude of the impact has been combined to arrive at an assessment of the significance of effect. The matrix is not intended to 'mechanise' judgment of the significance of effect but act as a check to ensure that judgments regarding value, magnitude of impact and significance of effect are reasonable and balanced.
- 1.30 The tabulated matrix below (Table 9.3) is generally consistent with recognised criteria as defined within ICOMOS Guidance (2011). This is not, however, intended to be prescriptive, and does not take into account the existing character of the areas around the site. Scale or severity of impacts or changes can be judged taking into account their direct and indirect effects and whether they are temporary or permanent, reversible or irreversible. The cumulative effect of separate impacts should also be considered. The scale or severity of impact can be ranked without regard to the value of the asset.

Table 9.3 – Significance of Effect Matrix			
Magnitude	Sensitivity		
	High	Medium	Low

Major	Major Adverse/Beneficial	Major-Moderate Adverse-Beneficial	Moderate –Minor Adverse-Beneficial
Moderate	Major –Moderate Adverse/Beneficial	Moderate –Minor Adverse-Beneficial	Minor Adverse/Beneficial
Minor	Moderate – Minor Adverse/Beneficial	Minor Adverse/Beneficial	Minor- Negligible
Negligible	Negligible	Negligible	Negligible

Assumptions / Limitations

- 9.21 Survey of the Site was undertaken in September 2023 by visual inspection.
- 9.22 Survey of the identified heritage assets within the study area was from publicly accessible areas. As such the study is limited to assessment from ground level.
- 9.23 Assessment of below ground archaeology does not form part of this assessment.

BASELINE CONDITIONS

- 9.24 The Site is bound by Park Place to the north and Cheetham Hill Road to the east. Built form at 21 Cheetham Road bounds the Site boundary to the south and 3 Park Place lies to the west. The site is currently occupied by a late 20th century, single storey building.
- 9.25 It is not protected by any built heritage designations; it does not contain any statutorily listed buildings, nor does it lie within a Conservation Area. At the time of writing, MCC do not have a local list of heritage assets and subsequently there are no formally identified non-designated heritage assets within the Site or in its setting. There are, however, a number of heritage assets within the setting of the Site; it is these which will form the central consideration of this Heritage Statement.
- 9.26 The Site falls within the Great Ducie Street Strategic Regeneration Framework ('SRF') which was adopted in 2018. The Site is referred to as Plot 60 within the SRF and identified as being an appropriate location for a development reaching between 20 and 29 storeys. The SRF also stipulates that a commercial use should be provided at ground level to contribute to the activation of the streetscape along Cheetham Hill Road.
- 9.27 A 500m study area has been established to identify all heritage assets within the local setting of the Site. The study area is considered to be an area of analysis proportionate to the nature of the Site, taking into account the character and form of the local townscape, and the scale of the Proposed Development. A site survey was undertaken in September 2023 to gain a full understanding of the Site and its surroundings and to confirm the appropriateness of the study area. The following 36 designated heritage assets fall within 500m of the site boundary:

- Chethams Hospital and Attached Wall (Grade I)

- Victoria Station Including Concourse to rear with Restaurant and Booking Hall (Grade II)
- Middle Bridge (Grade II)
- Manchester Parcel Post Office (Grade II)
- North Bridge (Grade II)
- The Tower of HMP Manchester (Grade II)
- Stephenson Bridge (Grade II)
- Gatehouse of HMP Manchester (Grade II)
- Union Bridge (Grade II)
- Holyoake House (Grade II)
- Cooperative Press (Grade II)
- City Buildings (Grade II)
- Charter Street Mission (Formerly Charter Street Ragged School and Working Girls' Home) (Grade II)
- Cooperative Society Building (Grade II)
- Cooperative Society Building (Grade II)
- Cooperative Wholesale Society Building to North of Junction with Hanover Street (Grade II)
- Cooperative Wholesale Society (Grade II)
- Cheetham Town Hall (Former) (Grade II)
- New Century House, including its attached Conference Hall and Abstract Concrete Relief Wall in the Entrance Piazza (Grade II)
- Co-Operative Insurance Society (Cis) Building (Grade II)
- Sharp Street Ragged School (Grade II)
- Parkers Hotel (Grade II)
- Knowsley Hotel (Grade II)
- Cheetham Town Hall Annexe (Former) (Grade II)
- Former Free Library (Grade II)
- Fragment of Hydes Cross Approximately 20 Metres South of Chethams Hospital (Grade II)
- Former Boys Prison Block of HMP Manchester (Grade II)

- Main Prison Block of HMP Manchester (Grade II)
- South East Wing to Chetham's Hospital (Former Manchester Grammar School) (Grade II)
- St Chad's Cheetham Hill First World War Memorial Cross (Grade II)
- Roman Catholic Church of St Chad and Attached Presbytery, and Boundary Walls (Grade II)
- Detached Block of Schoolroom Approximately 20 Metres South of Chethams Hospital (Grade II)
- Former Synagogue (Grade II)
- Ashton House (Grade II)
- Cathedral Conservation Area
- Shudehill Conservation Area

9.28 Given the dense nature of the townscape within the city centre to the south of the Site, it is considered that the Proposed Development will not materially (or significantly) affect an appreciation of the significance of a number of the heritage assets identified above. Owing to separating distance, or the obscuring effect of interposing development, a number of designated heritage assets have been scoped out of the assessment and are not considered further in this report. In some cases, such as the Grade II listed Fragment of Hydes Cross at Chetham Hospital, it is considered that through their nature as a piece of sculpture or street furniture, their wider setting contributes little to an appreciation or understanding of their special interest. Some heritage assets within the 500m study area have been scoped out on that basis.

9.29 This scoping exercise has also been informed by a ZTV prepared by rbmp for the purposes of the Heritage and Townscape/Visual Impact Assessment (see Figure 9 in supporting Heritage Statement).

9.30 For the reasons identified above, a number of heritage assets are scoped out and will not be considered further within this chapter. The scoped-out assets are as follows:

- Middle Bridge (Grade II)
- Manchester Parcel Post Office (Grade II)
- North Bridge (Grade II)
- Union Bridge (Grade II)
- Holyoake House (Grade II)
- Cooperative Press (Grade II)
- Cooperative Society Building (Grade II)

- Cooperative Society Building (Grade II)
- Sharp Street Ragged School (Grade II)
- Fragment of Hydes Cross Approximately 20 Metres South of Chethams Hospital (Grade II)
- Ashton House (Grade II)

SENSITIVE RECEPTORS

Heritage Baseline

- 9.31 The heritage baseline is summarised in Table 9.4 below. The Heritage Asset Plan at Figure 9.1 shows the location of those assets scoped into this chapter.

Table 9.4: Heritage Assets with potential to affected by the Proposed Development		
Map Reference	Name	Designation
Listed Buildings		
1	Chethams Hospital and Attached Wall	Grade I
2	Victoria Station Including Concourse to rear with Restaurant and Booking Hall	Grade II
3	The Tower of HMP Manchester	Grade II
4	Stephenson Bridge	Grade II
5	Gatehouse of HMP Manchester	Grade II
6	City Buildings	Grade II
7	Cooperative Wholesale Society Building to North of Junction with Hanover Street	Grade II
8	Cooperative Wholesale Society	Grade II
9	Cheetham Town Hall (Former)	Grade II
10	New Century House, including its attached Conference Hall and Abstract Concrete Relief Wall in the Entrance Piazza	Grade II

11	Co-Operative Insurance Society (Cis) Building	Grade II
12	Parkers Hotel	Grade II
13	Knowsley Hotel	Grade II
14	Cheetham Town Hall Annexe (Former)	Grade II
15	Former Free Library	Grade II
16	Former Boys Prison Block of HMP Manchester	Grade II
17	Main Prison Block of HMP Manchester	Grade II
18	South East Wing to Chetham's Hospital (Former Manchester Grammar School)	Grade II
19	St Chad's Cheetham Hill First World War Memorial Cross	Grade II
20	Roman Catholic Church of St Chad and Attached Presbytery, and Boundary Walls	Grade II
21	Detached Block of Schoolroom Approximately 20 Metres South of Chethams Hospital	Grade II
22	Former Synagogue	Grade II
23	Charter Street Mission (formerly Charter Street Ragged School and Working Girls' Home)	Grade II
24	Cathedral Church of St Mary	Grade I
Conservation Areas		
	Cathedral Conservation Area	Conservation Area
	Shudehill Conservation Area	Conservation Area

Non-Designated Heritage Assets		
25	21 Cheetham Hill Road	N/A
26	3 Park Place	N/A
27	6-12 Park Place	N/A

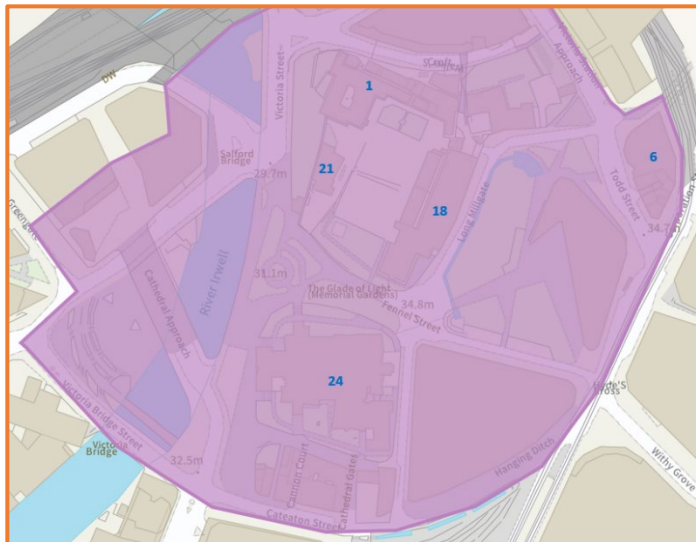
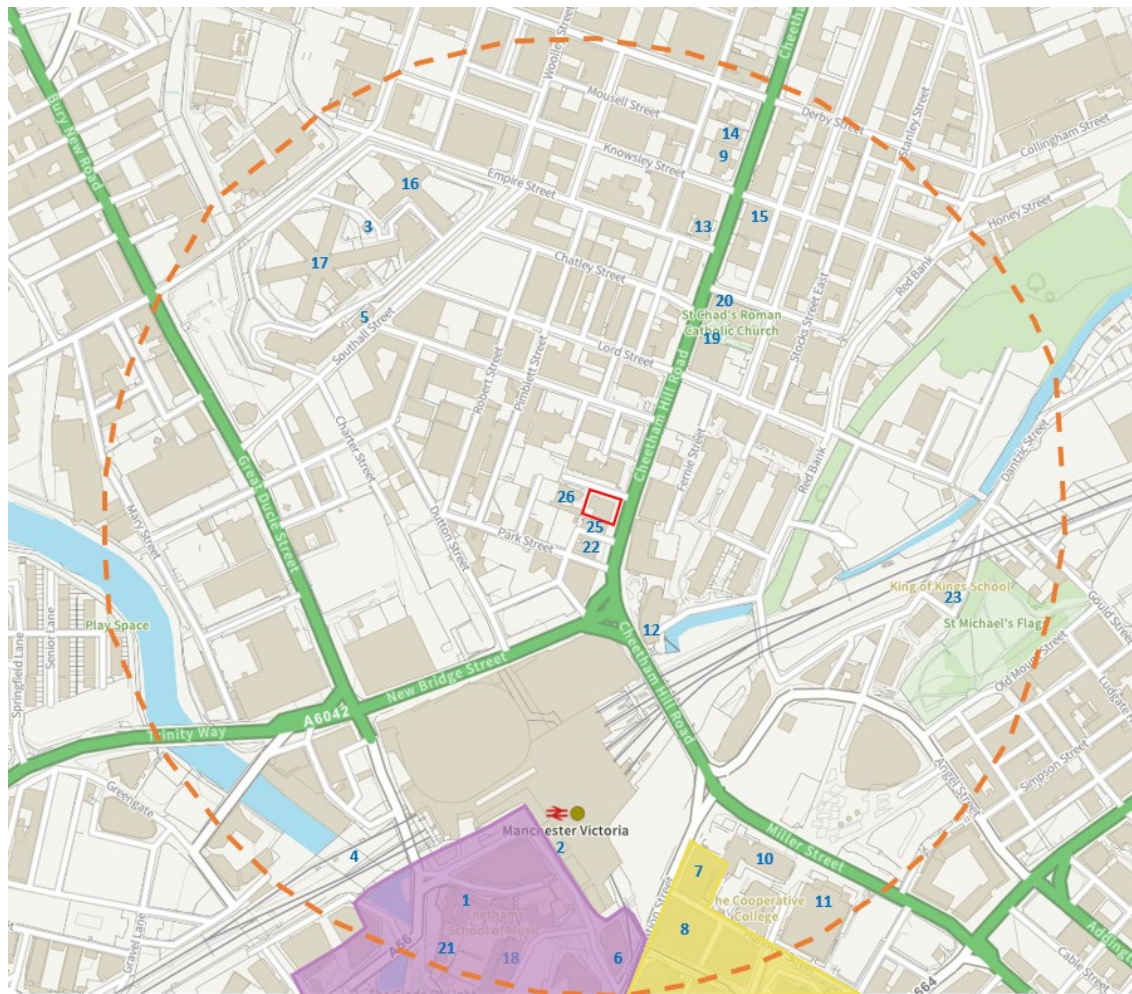


Figure 9.1: Heritage Asset Plan. Site boundary shown in red. 500m study area shown in orange. Listed buildings and non-designated heritage assets identified with blue numbers. Purple shading identifies Cathedral Conservation Area. Yellow Shading indicates Shudehill Conservation Area. Inset showing location of the Grade I listed Cathedral Church of St Mary (Number 24, outside the 500m study area) to the south.

- 9.32 The baseline appraisal of these heritage assets is provided in Appendix I of the Heritage Statement.

ASSESSMENT OF EFFECTS

- 9.33 Tables 9.5 and 9.6 below set out the likely effects of the proposals in the 'Construction' and 'Completed and Operational' phases of the scheme. The likely effects across these phases have been presented in two separate tables because additional mitigation measures are needed in the first of these phases to limit the extent and nature of the effect on heritage assets whilst in the operational phase, mitigation is embedded within the scheme through design quality and the delivery of public benefits.
- 9.34 Public benefits which are embedded into the scheme include wider planning benefits, such as general improvements to the amenity of the local area. These planning benefits are expounded in further detail in the Planning and Tall Buildings Statement prepared by Zerum.

Table 9.5 Likely Significant Effects: Construction		
Receptor	Additional Mitigation Measure	Likely Significant Overall Effect
Listed Buildings		
Chethams Hospital and Attached Wall	N/A	Negligible Neutral
Victoria Station Including Concourse to rear with Restaurant and Booking Hall	N/A	Negligible Neutral
The Tower of HMP Manchester	N/A	Negligible Neutral
Stephenson Bridge	N/A	Negligible Neutral
Gatehouse of HMP Manchester	N/A	Negligible Neutral
City Buildings	N/A	Negligible Neutral
Cooperative Wholesale Society Building to North of Junction with Hanover Street	N/A	Negligible Neutral
Cooperative Wholesale Society	N/A	Negligible Neutral
Cheetham Town Hall (Former)	N/A	Negligible Neutral

New Century House, including its attached Conference Hall and Abstract Concrete Relief Wall in the Entrance Piazza	N/A	Negligible Neutral
Co-Operative Insurance Society (Cis) Building	N/A	Negligible Neutral
Parkers Hotel	N/A	Negligible Neutral
Knowsley Hotel	N/A	Negligible Neutral
Cheetham Town Hall Annexe (Former)	N/A	Negligible Neutral
Former Free Library	N/A	Negligible Neutral
Former Boys Prison Block of HMP Manchester	N/A	Negligible Neutral
Main Prison Block of HMP Manchester	N/A	Negligible Neutral
South East Wing to Chetham's Hospital (Former Manchester Grammar School)	N/A	Negligible Neutral
St Chad's Cheetham Hill First World War Memorial Cross	N/A	Negligible Neutral
Roman Catholic Church of St Chad and Attached Presbytery, and Boundary Walls	N/A	Negligible Neutral
Detached Block of Schoolroom Approximately 20 Metres South of Chethams Hospital	N/A	Negligible Neutral
Former Synagogue	Construction methodology and programme	Minor Adverse
Charter Street Mission (formerly Charter Street Ragged School and Working Girls' Home)	N/A	Negligible Neutral
Cathedral Church of St Mary	Construction methodology and programme	Negligible Adverse
Conservation Areas		

Cathedral Conservation Area	N/A	Negligible Neutral
Shudehill Conservation Area	N/A	Negligible Neutral
Non-Designated Heritage Assets		
21 Cheetham Hill Road	Construction methodology and programme	Minor-Moderate Adverse
3 Park Place	Construction methodology and programme	Minor-Moderate Adverse
6-12 Park Place	Construction methodology and programme	Minor-Moderate Adverse

Table 9.6 Likely Significant Effects: Completed and Operational Development			
Receptor	Embedded Mitigation Measure	Likely Effect	Significant
Listed Buildings			
Chethams Hospital and Attached Wall	N/A	Minor Neutral	
Victoria Station Including Concourse to rear with Restaurant and Booking Hall	N/A	Negligible Neutral	
The Tower of HMP Manchester	N/A	Minor Neutral	
Stephenson Bridge	N/A	Negligible Neutral	
Gatehouse of HMP Manchester	N/A	Minor Neutral	
City Buildings	N/A	Negligible Neutral	
Cooperative Wholesale Society Building to North of Junction with Hanover Street	N/A	Negligible Neutral	
Cooperative Wholesale Society	N/A	Negligible Neutral	
Cheetham Town Hall (Former)	N/A	Minor Neutral	

New Century House, including its attached Conference Hall and Abstract Concrete Relief Wall in the Entrance Piazza	N/A	Negligible Neutral
Co-Operative Insurance Society (Cis) Building	N/A	Negligible Neutral
Parkers Hotel	N/A	Negligible Neutral
Knowsley Hotel	N/A	Minor Neutral
Cheetham Town Hall Annexe (Former)	N/A	Minor Neutral
Former Free Library	N/A	Minor Neutral
Former Boys Prison Block of HMP Manchester	N/A	Minor Neutral
Main Prison Block of HMP Manchester	N/A	Minor Neutral
South East Wing to Chetham's Hospital (Former Manchester Grammar School)	N/A	Minor Neutral
St Chad's Cheetham Hill First World War Memorial Cross	N/A	Negligible Neutral
Roman Catholic Church of St Chad and Attached Presbytery, and Boundary Walls	N/A	Minor Neutral
Detached Block of Schoolroom Approximately 20 Metres South of Chethams Hospital	N/A	Minor Neutral
Former Synagogue	Public benefits including activation of local streetscape and pedestrian environment in setting of heritage asset.	Minor Adverse
Charter Street Mission (formerly Charter Street Ragged School and Working Girls' Home)	N/A	Negligible Neutral

Cathedral Church of St Mary	High quality design including light materiality and lower shoulder block, reducing overall visual impact.	Minor Adverse
Conservation Areas		
Cathedral Conservation Area	N/A	Minor Neutral
Shudehill Conservation Area	N/A	Negligible Neutral
Non-Designated Heritage Assets		
21 Cheetham Hill Road	Public benefits including activation of local streetscape and pedestrian environment in setting of heritage asset.	Minor Adverse
3 Park Place	Public benefits including activation of local streetscape and pedestrian environment in setting of heritage asset.	Minor Adverse
6-12 Park Place	Public benefits including activation of local streetscape and pedestrian environment in setting of heritage asset.	Negligible-Minor Adverse

ADDITIONAL MITIGATION & ENHANCEMENT

- 9.35 The embedded mitigation embodied by the design quality of the scheme and the public benefits it will deliver serve to balance against the identified adverse impacts

on heritage assets identified in Table 9.7 above. Although adverse effects have been identified, none of these are considered to be significant in EIA terms.

- 9.36 Additional mitigation is required to off-set potential adverse effects identified in Table 9.6 arising from the construction phase. This additional mitigation will take the form of a Construction Methodology and Programme which limits the impact the demolition and construction activities will have on heritage assets in the setting of the Site (including dust, noise, vibrations, increased traffic, and, in the case of the Cathedral, visibility of cranes and construction equipment in long distance views). The effects from the demolition and construction works on heritage assets will be temporary. None of the effects are identified as being significant.

CUMULATIVE EFFECTS

- 9.37 The Proposed Development has been considered in the context of cumulative developments, principally the emerging schemes at 1 Lord Street and the Former Boddington Breweries Site. The three schemes have been addressed holistically in the accompanying Heritage Statement given the SRF context and the certainty that these schemes are coming forwards. The effects identified in Tables 9.6 and 9.7 are not considered to reduce or increase in the context of these cumulative schemes and as such remain the same.

SUMMARY & RESIDUAL EFFECTS

- 9.38 Upon completion and during the operational phase, the Proposed Development will result in a large number of **Minor Neutral** and **Negligible Neutral** impacts on heritage assets, in addition to a number of adverse effects ranging from **Negligible-Minor Adverse** to **Minor Adverse**.
- 9.39 The **Minor Adverse** impact on the Grade I listed Cathedral Church of St Mary is judged to derive through the cumulative impact of the Site in tandem with the emerging development at 1 Lord Street in views of the historic building along Deansgate (demonstrated by Views 1-3). This impact is identified as being at the lower end of the scale, transient in nature, and specific to this one sequence along the axial alignment of Deansgate as it towards the Cathedral. The ability to appreciate the architectural and historical significance of the Cathedral is by no means removed in these views, affected by the Proposed Development to a minor degree, and the Proposed Development does not affect other key views and vantage points from which the high significance of the Grade I listed building is entirely preserved.
- 9.40 The local impacts identified (**Minor Adverse** and **Negligible-Minor Adverse**) on the historic buildings closest to the Site are derived in the considerable uplift in scale on the Site which, in some instances, obscures local views of them and generally appears incongruent in terms of its scale and grain. The local enhancement to the streetscape and pedestrian environment delivered through the Proposed Development is recognised and identified as being something which has the potential to improve this aspect of the heritage assets' setting. A contextual response to the historic buildings is also legible in the architectural language of the building, most clearly seen through the podium level which mirrors the eaves height of the neighbouring buildings on Cheetham Hill Road. The injection of a new and viable use into the Site will have resultant beneficial effects which also naturally

improve and enliven the local settings of this group of historic buildings. The Proposed Development will herald further investment in this part of Manchester and make a positive contribution to its sense of vitality and regeneration.

- 9.41 Consideration to mitigating the impacts on the identified heritage assets has been made throughout the development of the proposals. Consequently, the residual effects will be the same as the potential effects outlined in Tables 9.6 and 9.7 above.
- 9.42 **No significant effects** in EIA terms have been identified.

REFERENCES

- Planning (Listed Buildings & Conservation Areas) Act 1990.
- National Planning Policy Framework (2021).
- Planning Practice Guide, Historic Environment (published 2014, updated 2019).
- Historic England, Conservation Principles. Policies and Guidance (2008).
- Historic England, The Setting of Heritage Assets (2017).
- Historic England, Historic Environment Good Practice Advice in Planning. Note 2: Decision-Taking in the Historic Environment (2015).
- Historic England, Statements of Heritage Significance (2019).
- Historic England, Tall Buildings: Advice Note 4 (March 2022).

10. SOCIO-ECONOMICS

INTRODUCTION

- 10.1 This chapter of the ES assesses the likely environmental effects of the proposed development with respect to socioeconomics. This chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the site and surrounding area; the mitigation measures required to prevent, reduce, or offset any significant adverse effects; and the likely residual effects after these measures have been adopted.

RELEVANT LEGISLATION & GUIDANCE

National Planning Policy Framework (NPPF); (MHCLG, 2023)



- 10.2 The NPPF guides local authorities, planning inspectors, and decision-makers on how to make planning decisions and shape development sustainably and efficiently. The Guide suggests that planning policies should promote the vitality and viability of town centres, allowing them to adapt, diversify, and include a mix of uses.
- 10.3 Local authorities are required to take the NPPF into account when preparing their local development plans and making planning decisions. The NPPF provides a set of principles and objectives for balancing competing interests, such as the need for housing and economic growth with environmental protection and community well-being.
- 10.4 The NPPF suggests local councils assess the housing needs (size, type and tenure) of different groups in the community while preparing local development plans.

Planning Policy Guidance (PPG): (MHCLG, 2019)

- 10.5 PPG refers to a series of documents issued by the government in the United Kingdom that guide local planning authorities, developers, and other stakeholders on various aspects of the planning system. The PPG offers detailed advice and interpretation of national planning policies, helping to ensure consistency and effective implementation across different planning authorities. This guidance is designed to assist local planning authorities in preparing their local development plans, as well as guiding developers and other stakeholders in understanding the expectations and requirements of the planning system.
- 10.6 The PPG highlights the importance of delivering housing, including affordable housing, to meet the needs of the local population. It provides guidance on housing density, mix, and design quality.

Regional Policy and Guidance

Greater Manchester Strategy 2021-2031 (GMCA, 2021)

- 10.7 This strategy sets out the long-term vision and priorities for the Greater Manchester area. It outlines the region's ambitions and objectives across various domains, including the economy, environment, transport, housing, health, and social issues.
- 10.8 The proposed development will help achieve some of the priorities and socio-economic objectives set, for the prosperity and holistic growth of the region, within the strategy document. The following are the key objectives of the strategy:
- a. Reduce inequalities to drive economic growth, ensuring that a variety of demographics are contributing to and benefitting from the region's success.
 - b. Foster and maintain social infrastructure and increase engagement with the local community.
 - c. Make Greater Manchester accessible for people of all ages and backgrounds.
 - d. Increase access to sustainable transport through improved public transport, cycling and pedestrian infrastructure.
 - e. Redevelop buildings to achieve equality and environmental goals.

Places for Everyone (PfE) Joint Development Plan (GMCA, 2021)

- 10.9 Places for Everyone is a long-term plan of nine Greater Manchester districts which will determine the kind of development that takes place in their boroughs, maximising the use of brownfield land and urban spaces while protecting Green Belt land from the risk of unplanned development. The plan is the result of a process that began as the Greater Manchester Spatial Framework (GMSF) in 2014 and has been informed by the feedback received from residents, businesses, and the development industry to previous consultations on that Plan. The nine districts decided to continue to produce a joint plan following the withdrawal of the Stockport Council from the GMSF in December 2020.

Local Policy and Guidance

Manchester Core Strategy (MCC, 2012)

- 10.10 The Manchester Core Strategy document, also known as the Core Strategy Development Plan Document (DPD), is a key planning document that sets out the long-term spatial vision and strategic policies for the city of Manchester. It provides a framework for guiding development and shaping the city's growth and regeneration. The document is prepared by Manchester City Council and is based on extensive research, consultation, and analysis of the city's needs and aspirations. It covers a wide range of planning-related topics, including land use, housing, employment, transportation, community facilities, and the environment.
- 10.11 The strategy document outlines Policy H1: prioritizes residential developments on brownfield sites and emphasizes the reuse of existing buildings in new developments.

- 10.12 Policy H2: Strategic Housing Location identifies that the key location for new residential development throughout the plan period should be the area to the east and north of Manchester City Centre, where the proposed development is planned to be situated. The policy highlights that developers should take advantage of opportunities to provide significant regeneration benefits, including by diversifying the housing offer to provide medium density (40-50 dwellings per hectare) family housing including affordable housing. The policy identifies the need for an average annual provision of 1,070 dwellings between March 2021 and March 2027 within the Strategic Housing Location.
- 10.13 In accordance with Policy H3, North Manchester has been designated to accommodate around 20% of the total 60,000 new residential units to be developed by 2027. This strategic plan places a strong emphasis on the prioritisation of family housing and other high-value developments. Furthermore, the policy allows for the construction of high-density mixed-use housing, particularly along major public transportation routes. Notably, this applies significantly to areas such as the Regional Centre and Cheetham Hill, where the proposed development is planned to be situated. Within these locations, there is a specific focus on enhancing accessibility and connectivity, aligning with the broader goals outlined in Policy H3.
- 10.14 Policy H8 outlines the affordable housing requirements for the residential development in North Manchester. These requirements entail contributing to a city-wide target of 20% affordable housing provision, which includes 5% for social or affordable rented housing and 15% for intermediate housing. The proportion of affordable housing should be in line with the development's size and type, with potential adjustments based on financial viability assessments. There is an emphasis on inclusive design for these housing units. Exemptions or reductions in affordable housing provision may be granted under specific conditions, such as the presence of a high level of existing affordable housing or viability concerns. Furthermore, alternative equity-based options for delivering affordable housing will be considered, all with the overarching goal of enhancing housing affordability while considering economic factors during the development process.
- 10.15 Policy C1 states that the development of district centres that is aligned with the distinct local character, provides housing, a good range of services including retail, health, and leisure facilities.
- 10.16 Policy C4 for North Manchester supports developments that promote vitality during the daytime and offer a broader range of commercial and public uses.

ASSESSMENT METHODOLOGY & SIGNIFICANCE CRITERIA

- 10.17 This section of the assessment outlines the methodology used to establish the potential economic and social effects of the proposed development assessed against the baseline conditions. The effects of the proposed development are considered at varying spatial levels according to the nature of the effect considered. This proposed approach follows Homes & Communities Agency (HCA) Additionality Guide 4th Edition, which is the widely accepted guidance for socio economic assessment.

Baseline Study Methodology

10.18 The relevant baseline data has been accessed and analysed for the site and/or local electoral ward level, and at the Borough and/or regional level where relevant. The baseline section of this assessment has been compiled using the following data sources:

- Additionality Guide (HCA, 2014);
- Annual Population Survey (ONS, 2022);
- Business Register and Employment Survey (ONS, 2022);
- Census data (Office for National Statistics (ONS), 2012; 2023);
- Manchester City Council data;
- Construction Skills network Forecast 2023-2027 (Construction Industry Training Board (CITB), 2023);
- Department for Education (DfE) data;
- Department for Levelling Up, Housing and Communities (DLUHC) (formerly MHCLG) data;
- Greater Manchester data;
- National Health Service (NHS) data; and
- 2015 and 2019 Index of Multiple Deprivation (Department for Levelling Up, Housing and Communities (DLUHC), formerly Department for Communities and Local Government (DCLG)), 2019).

Scope of the Assessment

10.19 The socio-economic assessment has been considered against existing socio-economic conditions. There are no obligatory standards or guidelines for defining socio-economic impacts and the significance of effects. In order to assess the significance of effects, professional judgement as to the proportionate impact of the proposed development in its local, regional and/or national context has been used.

10.20 The principal economic effect of the proposed development is considered relative to Manchester City Council, Greater Manchester (local), and the greater Northwest (regional) and England (national), as these represent the principal labour market catchment areas.

10.21 The measurement of additionality requires an intervention option, a reference (baseline) case, estimation of gross direct effects, leakage, displacement, and multiplier effects. This applies to this assessment's estimation of the employment generated by the proposed development.

10.22 Gross direct effects are the total effect of an intervention in terms of a specific output, such as employment. This considers both direct and wider induced effects.

- 10.23 Where possible, quantitative assessment has been undertaken. This relates particularly to the assessment of employment and economic effects. Gross employment is calculated in relation to the demolition and construction phases of the proposed development. The methodology applied for the calculation of gross employment generation in the demolition and construction phase is based on a turnover per construction employee estimate. For this assessment the average turnover per construction employee is approximately £119,956. The number of Full Time Equivalent (FTE) jobs created have been calculated based on the convention that each permanent FTE job is equivalent to ten person years of temporary employment.
- 10.24 At the operational stage, employment density figures for the non-residential uses within the proposed development are, where possible, derived from the HCA Employment Densities Guide.
- 10.25 In calculating the estimated number of jobs generated by the proposed development, both at the demolition and construction and operational stages, the methodology follows that set out in the HCA Additionality Guide 4th Edition. The guidance recommends that the gross number of jobs should be adjusted to arrive at a net figure which takes account of deadweight, leakage, and displacement. The same guidance has been used when calculating the indirect and induced multiplier effects. For clarity, the definitions of these terms are summarised below:
- Deadweight: defined as the 'output that would have occurred without the intervention.' In this case the 'intervention' is the proposed development.
 - Leakage effects are outputs that benefit those outside of the intervention's target area and are deducted from the gross direct effects. With regard to employment generation, this can be interpreted as those employed at the proposed development who reside outside of Manchester. According to 2021 Census data from the Office for National Statistics (ONS), 24.2% of those working in Manchester city live outside this area, which corresponds to a low to medium leakage rate as per HCA additionality guidance (ONS, 2012; HCA, 2014).
 - Displacement is the number of intervention outputs (e.g., jobs) that are accounted for by reduced outputs elsewhere in the target area. The additional employment generated at the proposed development would be net of employment lost from the existing uses on the site.
 - Indirect and induced multiplier effects in commercial development pertain to employment, investment and income associated with both the construction phase and occupation of the premises. The presence of multiplier effects implies that the proposed development will have proportionately greater effects than the direct effect of investment alone. For example, employment generated further along the supply chain represents an indirect multiplier effect, while those jobs created through extra spending from workers in the area represent an induced multiplier. For the purposes of this assessment a multiplier of 1.5 has been applied based on strong supply chain linkages at the regional level.
- 10.26 Additional expenditure associated with the proposed development is calculated with reference to Family Spending statistics (ONS, 2019c). Family Spending provides figures for average weekly expenditure on goods and services for UK households.

- 10.27 The expected population for the proposed development has been calculated with the use of the Greater London Authority (GLA) Population Yield Calculator (GLA, 2019). The GLA Population Yield Calculator is a tool to estimate population yield from new housing development. It is commonly used across Great Britain due to its robustness and flexibility.

Extent of the Study Area

- 10.28 Effects on social and community infrastructure are assessed by various geographical effect areas, according to the most up-to-date socio-economic data or policy documents. This depends in part on the availability of relevant data, but in all probability the impacts will be more local. The table below illustrates the geographical area of effects and summarises the rationale for the effect area.

Table 10-1 Geographic Area of Effect

Effect	Geographical Area of Effect	Rational base for impacted area
Employment Generation	Greater Manchester and North West region	Since demolition and construction employment is relatively mobile, it is not generally considered appropriate to assess the potential employment effects of the demolition and construction stage at the local level.
Additional local spending	City, Greater Manchester and North West region	Given the employment led nature of the proposed development it is likely that operational employment could impact at all scales.
Housing	City, Greater Manchester and North West region	The impact of additional local spending could impact at all scales
Primary Education Provision	Within 2 km of the site	Based on National Travel Survey distance thresholds.
Secondary Education Provision	Within 5 km of the site	Based on National Travel Survey distance thresholds.
Health Provision	Within 1.6 km of the site	Considered a reasonable walking distance within 1 km, extended to 1.6 km for lack of local service provision.
Open Space	On-site/100 m, 1.5 km radius	Considered a reasonable catchment area.
Child Play Space	On-site/100 m, 1.5 km radius	Considered a reasonable catchment area.

- 10.29 The assessment of likely socio-economic effects is considered based on:

- *Magnitude of change* – this entails consideration of the absolute numbers of residents or employees affected and the size of the geographic area within which effects will be experienced.
- *Scale of the impact* – this requires consideration of the relative magnitude of each impact in its relevant market context; and

- Duration of the impact – more weight is given to long-term permanent changes than to short-term, temporary ones.

10.30 Conformity with standards for provision or accessibility as set out in relevant guidance and scope for mitigation is considered.

Assessment of Effects

10.31 The following criteria have been used to describe the sensitivity of the receptors, the magnitude of the impacts and the significance of the effects. There is no statutory definition of what constitutes a significant socio-economic effect and guidance is of a generic nature. The assessment of effects in this chapter has been based on the general methodology presented in ES Chapter 6 Methodology and expert judgement. The assessment has sought to be objective and to quantify effects where possible. Where quantification has not been possible, a qualitative assessment has been made and justified.

10.32 Receptors sensitive to socioeconomic factors vary in their nature and scale, and as such their values cannot be directly compared. Evaluation of socioeconomic receptors therefore requires a qualitative, rather than quantitative, assessment of the sensitivity of each receptor, regarding their ability to respond to change based on recent rates of change and turnover.

Table 10-2 Criteria for determining receptor sensitivity

Receptor	Sensitivity
High	Receptors that will be most directly affected by any effects of the proposed development and receptors with significant economic or social stake in the area (e.g. residents of the Proposed development, local residents)
Moderate	Receptors that are sensitive to effects by virtue of proximity, accessibility or the specific facilities or uses provided by the proposed development (e.g. local community facilities, employees, businesses)
Low	This category represents receptors that are likely to experience some effect from the proposed development but at a low level (e.g. existing local businesses)
Negligible	Receptors with minimal connection to the site and little likelihood of being affected by any development effects (e.g. regional population)

Significance Criteria

10.33 The criteria used to assess how far an effect deviates from the baseline condition, i.e. the magnitude of change, are described in Table 10-3

Table 10-3 Criteria for determining magnitude of change / impact

Magnitude	Criteria
Large	Effects that would have a significant economic or social effect locally or would be felt more widely than the city scale. Likely to directly affect many receptors or those with high sensitivity.

Magnitude	Criteria
Medium	Effects that have a material economic or social effect locally or would be felt at a city scale.
Small	Effects that have some economic or social effect at a much-localised level.
Negligible	Effects that have minimal economic or social effects.

Significance of Effects

- 10.34 This assessment uses the scale of significance described in ES Chapter 6 Methodology to assess the potential and residual effects of the proposed development against the baseline conditions. As mentioned, the assessment process aims to be objective and quantifies the effects as far as possible. However, some socio-economic effects can only be evaluated on a qualitative basis.
- 10.35 The significance of a potential effect is derived by considering both the sensitivity of the feature and the magnitude of change, as demonstrated in Table 10-4.

Table 10-4 Matrix for determining effect significance

		Magnitude of Change / Impact			
		Large	Medium	Small	Negligible
Receptor Sensitivity	High	Major	Major	Moderate/Minor	Negligible
	Moderate	Major	Moderate	Minor	Negligible
	Low	Moderate/Minor	Minor	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

Consultation

- 10.36 An EIA scoping opinion (see Appendix 1.2) was received from Manchester City Council in September 2023. The scoping opinion did not raise any comments with respect to the proposed Socio-Economic ES chapter, that have not been covered within this assessment.
- 10.37 No statutory consultee responses to the scoping process were received in relation to the socioeconomic assessment.

BASELINE CONDITIONS

- 10.38 In this section, an overview of the current socio-economic conditions in the site's local and regional surroundings is presented. The assessment relied on various data sources, including:
- The 2021 Census data for insights into the area's demographics and economy.
 - Data from the Office for National Statistics (ONS) to gain a comprehensive understanding of key local socio-economic indicators.
 - Information from the National Health Service (NHS) to comprehend healthcare and related socio-economic aspects in the site's vicinity.
 - Information from MCC to assess the capacity of educational facilities within 2km and 5km from the proposed development for primary and secondary schools respectively.
- 10.39 Furthermore, relevant local and regional studies and assessments conducted in both Manchester City and Greater Manchester have been referenced to enhance the understanding of the site's existing socio-economic dynamics.

Existing Site

- 10.40 The site is situated in the northern part of Manchester, specifically on Cheetham Hill Road, approximately 0.23 miles from Manchester Victoria railway station. Currently, the site consists of a former light industrial unit over ground and mezzanine floor. It holds a highly prominent position along the main road, features a yard at the rear, and offers parking to the front and side of the property. This building is classified as Use Class B2 and has a rentable area of 8,192 square feet.
- 10.41 Currently, the unit is vacant but previously hosted several uses such as a jewellery and fashion wholesalers.

Demographics

- 10.42 The site is located in Cheetham Ward, approximately 1.4 miles to the north-east of Manchester City Centre and sharing a boundary with Salford. The ward boasts a sizeable and elongated urban centre. It has cultivated a thriving independent food sector, predominantly influenced by its diverse ethnic community. As of March 2022, Cheetham Ward, was home to a population of 21,500, constituting 3.9% of Manchester's total population, which saw a 2.6% increase between 2020 and 2022, reaching 563,000. In 2021, the proportion of individuals falling within the working-age bracket stood at 69%, slightly below the regional level of 71% (ONS, 2021).
- 10.43 Within Cheetham, 6,795 residents, or 69% of the population, were of working age (between 16 and 64 years of age) in 2021 (ONS, 2021). This is slightly lower than Manchester, which stands at 71%. It was recorded that within Cheetham ward the economically active population aged 16 and over was 5,555, or 50.8%, in 2021, compared to 56.1% in the Greater Manchester Area.
- 10.44 In 2021 within Cheetham 35.2% of those aged 16 and over had a degree level or higher qualification (National Vocational Qualification (NVQ) Level 4+). This is higher

than the average for Greater Manchester, which was recorded as 31.9%. However, 25% of the population of the Cheetham had no formal qualifications, compared to 20% in Greater Manchester.

- 10.45 Data from the 2021 Census show that the ethnic minority population forms over 73.0% of the total Cheetham population (ONS, 2021). This represents a significant increase on the proportion recorded in the 2011 Census, where 17.5% of the Cheetham population were from ethnic minority groups (ONS, 2012). In Greater Manchester, 23% of the population were from ethnic minority backgrounds. The largest minority ethnic group was Asian, Asian British or Asian Welsh: Pakistani in both the Cheetham and Greater Manchester accounting for 48.1% and 20.9% of the population respectively; of this, the Pakistani group is the largest, representing 36.7% and 11.9% of the population respectively.

Economic Profile (ONS, 2021)

- 10.46 Overall, the employment rate for 1–64-year-olds was reported to be 67.8% in 2022 making it worse than the average UK median. Gross disposable household income per head was approximately 15,882 GBP in 2020 also reported to be worse than median.
- 10.47 The industry sectors with the largest share of the workforce in Manchester City (as presented in Table 10-5) include health (14.5%), motor trades, wholesale, and retail (17.4%), and education (10.9%). These percentages closely align with both the North-western region and England as a whole. On the other hand, the industry sectors with the smallest share of the workforce in Manchester City are mining and quarrying and utilities (1.8%) and agriculture, forestry, and fishing (0.1%), with figures that mirror those of the North-western region and England.
- 10.48 The percentage of professionals, scientists, and technical professionals in Manchester City (7.6%) stands notably higher than in the North-western region and England (both at 6.7%).

Table 10-5 Proportion of Employment by Broad Industrial Group

Broad Industrial Group	Manchester City (%)	North-western Region (%)	England (%)
Agriculture, Forestry, and Fishing	0.1	0.7	0.8
Mining and quarrying and Utilities (electricity, water, gas)	0.8	1.7	1.5
Manufacturing	4.4	8.1	7.3
Construction	5	8	8.3
Motor Trades, wholesale and retail	15.4	16.1	15
Transport and storage	6	5.1	5
Accommodation and food services	7	5.1	4.9
Information and communication	5.3	3.5	4.7

Broad Industrial Group	Manchester City (%)	North-western Region (%)	England (%)
Financial and insurance activities	3.2	3	3.8
Real estate activities	1.5	1.5	1.6
Professional, scientific, and technical	7.6	5.8	6.7
Administrative and support services	6.6	5.1	5.3
Public administration and defence	4.4	6.1	5.8
Education	10.9	9.7	9.9
Health	17.4	16.2	14.6
Arts, entertainment, and recreation	4.5	4.2	4.6

Health (NHS, 2022)

- 10.49 The initial assessment indicates that there are four GP practices situated within a 1.5 km walking radius in Manchester. Of these, three out of four clinics exhibit a patient-to-GP ratio lower than 1,800, the Department for Health (DfH) target of registered patients per FTE GP, signifying available capacity. The nearest GP practice to the development site is the City Health Centre, which is situated at approximately 0.8 km from the proposed development location and maintains a patient-to-FTE GP ratio of 1,427. A summary of these practices, along with their pertinent information, is provided in Table 10-6 below:

Table 10-6 General Practitioners within walk in distance

GP Practice	Distance (km)	Registered Patients	FTE GPs	Patients per FTE GP
City Health Centre	0.8	2,950	2	1,427
BlackFriars	1.1	14,775	2	7,339
Whitley Road Medical Centre	1.1	6,788	5	1,250
Cheetham Hill Primary Care Center	1.1	12,403	13	952
New Collegiate Medical Centre	1.6	13,656	19	712
Total		50,572	40	1,264

Index of Deprivation (IMD, 2019)

- 10.50 According to the Index of Multiple Deprivation, Manchester City is ranked as the 6th most deprived local authority out of a total of 326 local authorities in the country. This classification places Manchester in the top 10% of the most deprived local authorities nationwide, a position consistent with its ranking in 2015.
- 10.51 Manchester City comprises 244 Lower Layer Super Output Areas (LSOAs), with 113 of them falling within the top 10% of the most deprived neighbourhoods in the country, and an additional 39 LSOAs falling within the top 20% of deprived areas.

Only one LSOA in Manchester is among the 20% least deprived neighbourhoods in England.

- 10.52 The site is situated in Manchester 056A, a neighbourhood that falls within the 10% most deprived nationally. In terms of average scores (IMD), Cheetham is ranked 12th among the 32 wards in Manchester, making it one of the most deprived areas in the city.
- 10.53 In Cheetham, 39.1% of households are not deprived in any dimension, which is slightly lower than the 43.6% reported for Manchester. Furthermore, 35% of households are considered deprived in one dimension, a figure higher than Manchester's 32.8%. Additionally, 18.9% of households in Cheetham experience deprivation in two dimensions, exceeding both Manchester's rate of 17.2% and England's rate of 14.2%. Finally, 6.6% of households in Cheetham face deprivation in three dimensions, while Manchester and England report rates of 6% and 3.7%, respectively. (ONS, 2022)

Housing Profile (Manchester City Council, 2012)

- 10.54 In North Manchester, the housing market offers a diverse range of choices to prospective residents. The median market house price in this area is £95,000, whilst the lower quartile (LQ) market house price is £72,000. This is considerably lower than the LQ market house price in Greater Manchester (£119,000) and England as a whole (£158,000) (ONS, 2019).
- 10.55 According to the 2021 census data, the City of Manchester boasts a total of 214,730 dwellings, with approximately 7.5% of them located within Cheetham ward. Cheetham's housing landscape is characterized by 61.7% townhouses, which is slightly below the citywide percentage of 65.3%. Additionally, 37.6% of the dwellings in Cheetham are flats, compared to the citywide figure of 34.6%. These statistics provide insights into the housing composition in both North Manchester and the Cheetham neighbourhood specifically.
- 10.56 Over 61.8% of households in Manchester live in rental accommodations, with 29.5% of households in the social rented sector. This is significantly higher than the proportion of households renting in the North West (36.8% households renting, of which 17.6% in the social rented sector) and England as a whole (37.6% households renting, of which 17.1% in the social rented sector) (ONS, 2022). According to Census 2021 data, Manchester was in the highest 4% of English local authority areas for the share of households in the social rented sector in 2021.

Housing Need

- 10.57 The Greater Manchester Economic Forecast Modelling for 2010 paints a vivid picture of Manchester's economic and demographic evolution over the next two decades. This includes positive forecasts such as a 70% boost in GVA, a substantial 20% surge in job opportunities, an expected 17% rise in population, and a noteworthy 22% increase in households. This rate of growth was evidenced in the Census 2021 results, which show a 9.7% population increase in Manchester, compared to 5.2% in the North West. This in turn has resulted in unprecedented demand for housing and new homes. A pivotal challenge within this vision is accommodating an additional 50,000 households over the next 20 years.

- 10.58 The Manchester Housing Strategy (2022) highlights the need for provision of affordable housing and identifies a delivery target of 10,000 homes between 2022 and 2032, 3,000 of which should be built in the city centre (an average of 1,000 homes each year over the lifetime of the strategy). This represents just under a third of the 36,000 new homes that Manchester City Council are committed to building in the city over the next ten years. In addition, the Strategy seeks to ensure that more than 80% of all homes built by 2032 are on brownfield sites close to public transport.
- 10.59 In addition, the 2010 Housing Requirement and Demand Assessment (Arc4) (Arc, 2010) highlights a specific demand for residential properties with three to four bedrooms, including detached housing in Cheetham ward, where the site is situated.

Education (Manchester City Council)

- 10.60 In 2019, the average trip distance to school for 5- to 16-year-olds in England was 2.4 miles (3.8 km) and the average time to school was 19 minutes. This varies based on the type of schools and age of pupils.
- 10.61 The National Travel Survey states that the distance threshold for primary school children to travel to school in Greater Manchester is 2km (DfT, 2020). As such, the baseline for primary education considers schools within 2km of the site.
- 10.62 Travel statistics by the Department for Transport show that secondary school children travel further and therefore it is appropriate to consider education provision on a wider geographical basis. According to the National Travel Survey, the distance threshold for secondary school children to travel to school in Greater Manchester is 5 km.
- 10.63 The existing baseline education provision relevant to the site has been assessed considering the National Audit Office (NAO) guidance. In terms of availability of education places, the NAO states that "it considered that on average 5 per cent was the bare minimum needed for authorities to meet their statutory duty with operational flexibility, while enabling parents to have some choice of schools".

Primary Education

- 10.64 Table 10-7 presents information about the nine primary schools located within a 2 km radius of the site, which corresponds to the average distance travelled by primary-age pupils in North-West England (DfT, 2020). Notably, The Olive Primary School is scheduled to open in September 2024 and will cater to children aged 4 to 11 years old.

Table 10-7 Primary Education Schools within walking distance

School Name	Number of Roll	Capacity	Surplus/ Deficit	Surplus/Deficit at 95% Capacity
Cheetwood Community School	224	210	14	24
Abbott Community	239	240	1	11
St Chad's Catholic	239	472	233	209
St Patrick's Catholic	428	460	32	11

School Name	Number of Roll	Capacity	Surplus/ Deficit	Surplus/Deficit at 95% Capacity
Unity Community	306	420	124	93
Co-Op Academy New Islington	353	420	67	46
St Malachy's RC	230	242	12	0
Saviour CofE	160	210	50	40
The Olive School	-	-	-	-
Total	2,179	2,674	533	394

Secondary Education

- 10.65 Table 10-8 provides information for five secondary schools accommodating students aged 11 to 18, located within a 5 km radius of the site. This distance aligns with the average distance travelled by secondary-age pupils in North-West England (DfT, 2020). Both schools have the capacity to accept new students.
- 10.66 The difference between the number of students enrolled in a school and the number of school places is presented within Table 10-8. The difference indicates whether provision of school places is over or under capacity. The data suggests that there is a surplus of 348 places in secondary schools located within 5 km of the site from schools with available data (Manchester City Council). If it is assumed that 95.0% occupancy should be planned for, as per Audit Commission Guidance, the total surplus would decrease to 268 secondary school places within 5.0 km of the site. It is noted however that full capacity information is not available for some of the schools.

Table 10-8 Secondary Schools within walking distance

School Name	Number of Roll	Capacity	Surplus/ Deficit	Surplus/Deficit at 95% Capacity
Eden Boys' Leadership Academy	627	800	173	133
Eden Girls' Leadership Academy	625	800	175	135
Manchester Communication Academy	1,224	1,200	-4	-64
Abraham Moss	1822	1830	8	-84
The King David High School	784	800	16	-24
Total	5,082	5,430	368	96

Open Space

- 10.67 The baseline assessment shows that the site is within a reasonable walking distance (1.2 km) of two parks and gardens. Additionally, there are two natural and semi natural open spaces within 1.2 km.
- 10.68 The estimated allocation of green space in Cheetham Hill is 0.8 hectares per 1,000 residents, falling significantly short of Manchester Council's recommended greenspace provision standard of 1.26 hectares per 1,000 residents.
- 10.69 According to Manchester City Council there are a total of 60 open spaces within the city.

Table 10-9 surrounding parks and open spaces.

Open Space Categorisation	Accessibility Standard	Size Guideline	Example and distance from proposed development
Regional Park	Accessible, high-quality opportunities for informal recreation and community events. (Typically, within a 15 minute drive.)	67 ha	Highfield Country Park (4.9 km)
City Parks	Often larger than 20 ha, bigger catchment area than local parks, provides variety of spaces.	28 ha	Alexandra Park
Local Park	Are usually small neighbourhood parks (10-minute walk time)	22,600 m ²	Cheetham Park (1.2 km)
Small Open Spaces	10- minute walk time	18,000 m ²	St Michaels flag & Angel Park (0.8 km)

SENSITIVE RECEPTORS

- 10.70 The socioeconomic context is ever evolving and responsive, with ongoing shifts that impact various elements. In this section of the ES chapter, the adaptability of receptors is evaluated, assigning a 'low' sensitivity designation to those capable of adjusting to changes. For instance, displaced workers who can secure alternative employment within the surrounding area or within Greater Manchester are considered less sensitive than receptors that exhibit less flexibility, like social infrastructure resources. A summary of the identified receptors and their sensitivity can be found in Table 10-10.

Table 10-10 Sensitive Receptors

Receptor	Sensitivity	Justification
Local residents in surrounding areas	Moderate	The area is presently vacant; consequently, no current residents will be affected. However, nearby residents may be sensitive to alterations in traffic patterns and property values. Furthermore, the introduction of 154 new dwellings will lead to an increase in the local population.
Children & young people in the local areas	Low	There are currently no residents and no children on the site. Residents in the neighbouring areas will be affected by increase in services and service demand.
Local Businesses	Low	Sensitivity varies depending on the nature of the business and its dependence on pedestrian traffic. Businesses located near the proposed development are likely to exhibit greater sensitivity to shifts in accessibility and competitive factors. While certain businesses might experience temporary disruptions during the demolition and construction phases, it is important to note that the long-term impacts will endure owing to the rise in local expenditure.
Employment Opportunities	Low	The impact of the proposed development is expected to be minimal due to the site's current vacancy. However, the addition of more commercial space is anticipated to have a positive effect.
New residents within the proposed development	Moderate	The proposed development will have moderate to high levels of impact on new residents. New residents are likely to be readily adaptive to change.
New employees within the proposed development	Moderate	The proposed development will have moderate to high levels of impact on new residents. New employees and businesses are likely to be readily adaptive to change.

ASSESSMENT OF EFFECTS

Demolition and Construction Phase

- 10.71 The proposed development is expected to generate new employment opportunities within the construction sector. To estimate the scale of this employment, standard ratios for gross output per construction employee have been used. This chapter first projects the total gross construction employment resulting from the proposed development and subsequently consider factors such as leakage, displacement, and multiplier effects. These analyses have enabled an evaluation of the net impacts on both local and regional economies.
- 10.72 The estimated construction period for the proposed development spans approximately 137 weeks, accounting for the overlap between enabling works and the construction programme (i.e., non-permanent works). Consequently, the impact is transient in nature. Although these employment opportunities are short-term, they represent a favourable economic impact that can be quantified based on the construction's scale and type.
- 10.73 The direct expenses associated with constructing the proposed development will boost economic activity in Cheetham ward, Manchester and the broader regional economies. To estimate the employment created during the temporary construction phase, the average output per construction industry employee is applied to the estimated total construction cost. As a result, the proposed development is projected to generate a total of up to 291 person-years of construction employment on-site.
- 10.74 Using the convention of equating ten person-years of employment to one full-time equivalent (FTE) job in the construction sector, it is estimated that approximately up to 29 FTE construction jobs will be generated during the temporary construction phase.

Leakage Effects

- 10.75 Leakage effects refer to impacts that occur outside the project's immediate area. In the case of the proposed development, leakage pertains to the loss of employment opportunities beyond the boundaries of Manchester City. Analysis utilising Census 2021 origin-destination data reveals that 75.8% of individuals employed in Manchester travel less than 10 km to their work destination. This corresponds to a moderately low leakage rate as defined by HCA Additionality Guidance (HCA, 2014), suggesting that a substantial portion of the benefits will accrue to individuals residing outside the project's benefit area.
- 10.76 Applying a leakage rate of 24.2% to the estimated up to 29 gross direct construction jobs created by the proposed development indicates that an estimated up to 22 individuals from within Manchester and up to 7 individuals from elsewhere will be employed on-site throughout the construction period.

Displacement Effects

- 10.77 Displacement measures the extent to which a project's benefits are offset by reductions in output or employment elsewhere. Increased demand for labour has the potential to draw workers away from other positions, thereby reducing the net benefit.
- 10.78 Construction workers often shift between projects, especially when delays occur or to meet project deadlines. It is assumed that due to the labour market's flexibility and the fact that construction workers at the proposed development represent a small proportion of the Manchester labour force, displacement effects on direct construction employment will be minimal. In the context of a Manchester construction project, a low displacement rate of 25% is considered appropriate, as per the HCA guide (HCA, 2015). Applying this displacement rate to the total gross direct employment figure of up to 29 construction employees yields a net direct employment figure of up to 22 workers.

Multiplier Effect

- 10.79 In addition to the direct employment generated by the proposed development itself, there will be an increase in local employment arising from indirect and induced effects of the construction activity. Employment growth will arise locally through manufacturing services and suppliers to the construction process (indirect or supply linkage multipliers). Additionally, part of the income of the construction workers and suppliers will be spent within Greater Manchester Area, generating further employment (in terms of induced or income multipliers).
- 10.80 Applying a multiplier of 1.5 to the total net direct employment figure of 29 construction workers results in net indirect employment of 11 jobs during the construction period.

Net Construction Employment Effects

- 10.81 Table 10-11 presents the temporary employment generated by construction of the proposed development, taking leakage, displacement, and multiplier effects into account. The total net additional employment created by the proposed development within Manchester is estimated to be up to 25 FTE jobs, whilst up to 8 FTE jobs will be created outside of Manchester, supporting a total of 33 FTE net jobs during the temporary construction phase.

Table 10-11: Construction Employment Effects

	Manchester	Elsewhere	Total
Gross Direct Employment	22	7	29
Displacement	6	2	9
Net Direct Employment	17	5	22
Indirect & Induced Employment	8	3	11
Total Net Employment	25	8	33

- 10.82 In the context of a large labour pool of construction workers in Manchester, the direct, indirect, and induced employment and expenditure created by the temporary construction phase of the proposed development is assessed to result in a minor beneficial, long-term and temporary effect on the Manchester economy. This is not significant in EIA terms.

OPERATIONAL EFFECTS

- 10.83 This section analyses the scale, duration, and significance of socio-economic effects relative to the baseline socioeconomic conditions recognised in the previous sections of this chapter. Effects are assessed for the proposed development once completed and occupied.
- 10.84 Relevant aspects of the proposed development and designed-in mitigation.

Existing Employment Deadweight

- 10.85 The existing employment that the site supports can be referred to as the 'deadweight' level of employment. 'Deadweight' refers to the outcome which would have occurred without intervention. As the site currently does not accommodate any employment, the existing employment deadweight is considered zero.

Operational employment and economic effects

- 10.86 Upon completion and operation, the proposed development is expected to create long-term job opportunities. When estimating the project's operational job impact, it is essential to consider both its gross and net effects. This evaluation should account for factors such as leakage, displacement, and multiplier effects.
- 10.87 The level of existing employment supported by the site can be described as its "deadweight" employment. Deadweight refers to the outcome that would naturally occur without any external intervention. Since the site currently does not host any employment, its existing employment deadweight is zero.
- 10.88 The number of jobs generated by the proposed development will be contingent on the final mix of development and the allocation of floor space by usage category. The proposed development plan includes 180.5 sq. m. (Gross Internal Area) of commercial space.
- 10.89 Based on appropriate employment density calculations, it is anticipated that the proposed development, once completed and operational, could yield a total of 9 gross direct jobs within the proposed Commercial Class E space. It is worth noting that the estimated gross direct employment might not accurately represent the actual employment resulting from the commercial floor space. This discrepancy arises from the employment density assumptions made during this stage. The precise employment density of the flexible commercial space will depend on the specific arrangement of each usage class during operation.

Table 10-12: Gross Direct Operational Employment (BH calculations.2023)

Employment Space	Floorspace (sqm) (GIA)	Employment Density (sqm) (GIA)	Gross Direct Employment
Commercial E	180.5 sqm	16	9

- 10.90 Assuming a leakage rate of 24.2%, a low level of displacement (25.0%) and a 1.5 multiplier, it is estimated that the proposed development will result in a total net gain of an estimated 20 jobs, of which approximately 15 will be created within Manchester. Table 10-13 presents further details.

Table 10-13: Net Operational Employment (BH Calculations, 2023)

Employment Space	Manchester	Elsewhere	Total
Gross Direct Employment	14	4	18
Displacement	4	1	5
Net Direct Employment	10	3	13
Indirect and Induced Employment	5	2	7
Total Net Employment	15	5	20

- 10.91 Considering the additional net direct, indirect, and induced employment created by the permanent employment from the proposed development, it is assessed that there will be minor beneficial effect (not significant), long-term permanent effect on the city of Manchester economy.

Indicative tenure size and unit mix

- 10.92 The proposed development will introduce 154 more units to the neighbourhood, comprising a total area of 9,900 square meters. Within this, 9,084 square meters will be designated for residential units, 180.5 sqm for commercial purposes, 192 sqm for amenities, and 74 sqm for management.
- 10.93 Additionally, there will be a dedicated area of 419 sqm for back-of-house operations, and 265 sqm will be allocated for plant space.

Table 10-14: Indicative unit size mix

Dwelling	Private Units	Affordable Units	Total
1 Bedroom	37	9	46
2 Bedroom	86	22	108
Total	123	31	154

- 10.94 The likely number of future residents at the proposed development has been calculated based on the occupancy rates of the different sized homes, as per the

approach in the GLA Population Yield Calculation (2019), which, in the absence of local guidance, provides a realistic estimate of the number of future residents of the proposed development.

Table 10-15: Total Number of Residents in the proposed development (GLA, 2019)

Dwelling	Private Units	Affordable Units	Total Residents
Ages 0, 1, 2, 3 & 4	29	14	43
Ages 5, 6, 7, 8, 9, 10 & 11	19	9	28
Ages 12, 13, 14 & 15	3	3	6
Ages 16 & 17	2	1	3
18-64	205	44	243
65+	5	1	6
Total	263	72	335

Additional Local Spending

- 10.95 To estimate the benefit of the proposed development in terms of additional local expenditure, average weekly spending figures for residents in North - West England have been applied to the estimated number of residents. The likely number of residents has been calculated based on the occupancy rates outlines within the GLA Population Yield Calculator.
- 10.96 An estimated 335 people will reside at the proposed development.
- 10.97 The ONS provides estimates of household spending by region, which can be adjusted using 2021 Census data to provide an estimate of annual spending per resident. To ensure a conservative estimate of new local spending, it is further assumed that some of those moving to the new market tenure homes would already reside in the local area, Manchester, and would thus not generate net new expenditure. To account for this, a displacement rate of 25% has been applied based on HCA ready reckoners. This discount also accounts for the potential to 'double count' the employment benefits.
- 10.98 To account for additional regional expenditure rather than at city of Manchester level, a leakage rate is accounted for. It is assumed that 24.2% of the household expenditure will be leaked outside of Manchester.
- 10.99 By applying these assumptions, a total net expenditure of £13,591 per person per annum is generated into the Manchester economy, as shown in Table 10-16

Table 10-16: Direct, Indirect and Induced Spending per Person per Annum in Manchester (HCA, 2014; ONS, 2022; Buro Happold calculations, 2023)

	Gross Direct Expenditure (£)	Net Direct Expenditure (£)	Total Net Expenditure (£)
Total Net Spending	15,690	11,768	10,591

- 10.100 Applying the average expenditure figures to the estimated 263 residents occupying market homes within the proposed development, an estimated total net benefit of up to £2.8 million per annum of additional local spending is generated. It is assumed that residents occupying the new affordable housing already live in the area therefore spending by these residents is not included in a calculation of the net additional local spending. The table below shows the direct, indirect, and induced residential spending in Manchester.

Table 10-17 Direct, Indirect and Induced Residential Spending in Manchester (HCA, 2014; ONS, 2022; Buro Happold calculations, 2023)

	Gross Direct Expenditure (£)	Net Direct Expenditure (£)	Total Net Expenditure (£)
Total Net Spending	4,126,470	3,094,853	2,785,367

- 10.101 Considering the additional annual spending by residents within the proposed development, it is assessed that there will likely be a moderate beneficial (significant), long-term permanent effect at the local level and a minor beneficial (not significant), long-term permanent effect at all other spatial scales.

Housing

- 10.102 The Manchester Local Plan Strategy (2012) set out a target for an additional 50,000 dwellings in 20 years, resulting in an average of 2,500 dwellings provided per year. Policy H2 of the Core Strategy identifies a delivery requirement of 1,070 per annum on average within the Strategic Housing Location, where the proposed development is located. This target was supplemented by the Manchester Housing Strategy (2022), which identified a delivery target of 36,000 dwellings between 2022-3032.
- 10.103 The proposed development will contribute to meeting these targets by providing an additional 154 units, which represents approximately 6.1% of the average annual housing target and over 14% of the annual average housing delivery requirements identified for delivery within March 2021-2027 within the Strategic Housing Location by Policy H2 of MCC Core Strategy (2012).
- 10.104 Once the proposed development is completed, the additional 154 homes are considered to have a moderate beneficial (significant), long-term permanent effect on meeting the target for new housing provision in Manchester.

Affordable Housing

- 10.105 Affordable housing is defined as homes subsidised below market value ('intermediate homes') and social rented homes.

- 10.106 The Manchester City Council Plan (2012) set the expectation that new development will provide a minimum of 20% affordable housing, including 5% for social or affordable rented housing and 15% for intermediate housing.
- 10.107 In addition, the Manchester Housing Strategy (2022) identifies a delivery target of 10,000 new affordable homes in the decade between 2022 and 2032.
- 10.108 Of the 154 homes included in the proposed development, 123 will be sold or rented privately, while 31 units will be rented at an affordable rate and/ or will be sold as shared ownership. This equates to 31 units or 20% affordable homes, with a tenure split to be determined through further discussions with an RP. The proposed development therefore meets the city of Manchester target for 20% of homes/habitable rooms to be affordable and will contribute towards meeting the new affordable homes delivery target.
- 10.109 Overall, it is assessed that the proposed development will make a contribution to new affordable homes targeted across Manchester. The proposed development is therefore considered to have a direct moderate beneficial (significant), long-term permanent effect on affordable housing provision in Manchester.

Education

- 10.110 This section assesses the effects of increasing demand for education. The proposed development will result in an increased demand for educational places in any households with children occupying the new units.

Education Demand

- 10.111 The education assessment below describes the pupil yields and population ratios used to calculate the number of children resident within the proposed development likely to require access to schools within the local area.
- 10.112 For the purposes of this assessment, a 'worst case scenario' based on the approach set out by Education Facilities Management Partnership Limited has been assumed to model the likely number of children likely to reside within the proposed development.
- 10.113 Applications of these yields and assumptions to the accommodation schedule provides the following total number of school places at different stages of education provision as shown in Table 10-18.

Table 10-18: Estimated School Places Yield from the proposed development

	Primary School	Secondary	Total
Number of pupils	28	9	37

Primary Education

- 10.114 The baseline analysis indicates that there is currently a surplus of 394 primary school places within 2.0 km of the site at a 95% occupancy rate.
- 10.115 Considering the assessment above, the expected demand arising for primary school places of up to 28 students could be fully met within local schools. As a result, it is anticipated that the proposed development will have a negligible effect on the provision of primary school places at the local level, which is not significant.

Secondary Education

- 10.116 The baseline analysis indicates that there is currently a surplus of 96 secondary school places within 5.0 km of the site at a 95% occupancy rate.
- 10.117 It is estimated that the proposed development will result in demand for up to 9 additional secondary school places, which could be met locally. As such, the proposed development is likely to have a negligible effect on secondary education provision within Cheetham Ward.

Primary Healthcare

- 10.118 The baseline analysis identifies one GP practice located within a 1.6 km walking distance of the site. The current patient-to-FTE GP ratio stands at 1,264, which is notably lower than the national average of 1,800 patients per GP.
- 10.119 The projected addition of 335 residents due to the proposed development will increase the demand on local healthcare facilities. Furthermore, since 2015, employees have had the option to register with a GP near their workplace rather than their home. The inclusion of 10 new employees within the proposed development is expected to have a minimal impact on local GP practices.
- 10.120 In the scenario where all new residents and employees choose to register with local GPs, the patient-to-GP ratio would rise to 1 GP per 1,273 patients, significantly lower than the national standard of 1,800 patients per GP. As a result, it is assessed that the proposed development is likely to have an overall negligible and enduring impact on primary healthcare provision at the local level.

Open Space

- 10.121 The baseline analysis shows that the site is within a reasonable walking distance (1.2 km) of two parks and gardens.
- 10.122 Manchester City Council sets out standards of green space provision for parks and gardens at 0.40 ha/1,000 persons, natural and semi-natural greenspace at 0.24 ha/1,000 persons, and amenity greenspace at 1.15 ha/1,000 persons.
- 10.123 It is estimated that the proposed development will accommodate 335 residents, who will place additional demands on open space. The baseline analysis has shown

that there is a shortage of neighbourhood-level and large open spaces in immediate proximity to the site, but the site has good access to local-level open spaces and small playgrounds.

- 10.124 The proposed development will include approximately 0.033 ha of green and open space consisting of a semi-private courtyard (125sq.m) and landscaped residential podium roof terrace (205sq.m) that accommodate a total of 74sq.m raised planting and 9 trees. The provision of green public space will help mitigate the impact the increased resident population may have on public spaces in the local area and provide new accessible open space for residents and employees within the surrounding locality.
- 10.125 Overall, it is estimated that the proposed development will have a negligible effect on open space provision in the local area.

Play Space

- 10.126 The baseline analysis shows that there are two playgrounds within 1.5 km walking distance of the site.
- 10.127 Manchester City Council sets out the provision of areas (0.027 ha per 1,000 population) designed for play and social interaction involving children and young people.
- 10.128 The child yields, or the estimated number of children to reside within the proposed development once completed and occupied, as contained within the GLA Population Yield Calculator, have been applied to the accommodation schedule.

Table 10-19 shows the results of the estimated play space requirements for the proposed development.

Total Number of Residents	Total Play Space Recommended(ha)
335	0.027 ha

- 10.129 Applying local policy targets, there is a requirement for 0.027 ha of play space to serve 80 children aged 0 to 18 years old estimated to reside within the proposed development once completed and fully occupied.
- 10.130 The proposed development will include approximately 0.033 ha of green and open space in the form of a semi-private courtyard and a private landscaped roof terrace.
- 10.131 Considering the provision of green infrastructure and play areas within the proposed development and the proximity to other areas designated for children and young people, it is assessed that the proposed development is likely to have a negligible effect on play space provision within the local area.

MITIGATION & ENHANCEMENT

- 10.132 There are no significant adverse socio-economic effects identified for the proposed development that require mitigation during the demolition/construction phase or the operation phase.

CUMULATIVE EFFECTS

- 10.133 Cumulative effects occur when a single receptor is affected by more than one effect at any point in time. This section of the chapter assesses the socio-economic effects of the proposed development in combination with the potential socio-economic effects of committed developments.

- 10.134 The proposed development is expected to start construction in Q4 2023 and is expected to be completed by Q4 2026. Five cumulative schemes have been considered for the assessment of the combined effects they will have on identified sensitive receptors within Manchester.

- **1 Lord Street** (113914/FO/2016): Erection of a 16 storey building to form 192 residential apartments (Use Class C3a) together with a ground floor commercial unit (172 sqm) (Use Class A1, A2, A3 or B1) with associated vehicular access from Fernie Street, car parking and hard and soft landscaping following demolition of existing buildings.
- **New Victoria, Corporation Street:**
 - 134092/FO/2022: Erection of a 10 storey office building (Use Class E) plus basement, a ground floor commercial unit (Use Class E), with associated external amenity in the form of roof terraces, plant, substation, cycle parking, hard and soft landscaping, access and servicing and other associated works.
 - 111777/FO/2016/C: Erection of two residential buildings of a maximum 21 and 26 storeys to accommodate 520 apartments (178 x 1 bed, 286 x 2 bed and 56 x 3 bed apartments) (Use Class C3). Erection of one office building of maximum eight storeys comprising up to 11,647 sqm (GIA) of office accommodation. Ground floor commercial space (Use Class A1, A2, A3 and B1), lower ground level car parking, access and servicing arrangements, alterations to Corporation Street, new public realm and other associated works.
- **Land bound by Great Ducie Street** (132416/FO/2021): Erection of two buildings part 27, 20, 17 storeys and part 11 and 10 storeys to form a mixed use development comprising of 461 residential apartments (Use Class C3a) and ground floor commercial uses (Use Class E) (718 sqm) together with public realm including courtyard pocket park, landscaping, car parking and other associated works.
- **Former Boddingtons Brewery site, Dutton Street** (118831/FO/2018): Erection of two buildings (a part 17, part 12 storey building and a part 26, part 23 storey building) to form 556 residential units (Use Class C3a) together with the creation of 3490 sqm of commercial floor space (Use Classes A1, A2, A3, B1 and D1) with associated landscaping, access and other associated works.

During Construction

- 10.135 The construction phase of the proposed development along with the committed developments identified will generate additional construction related employment within Manchester and the North West. The scale of the construction employment generated cannot be readily quantified on the basis that the information available for each scheme is commercially sensitive. In addition, the timing and phasing of the construction of these schemes along with the proposed development may not occur over the same time periods, therefore the temporary construction related effects may not coincide.
- 10.136 The combined effects of the developments are likely to have a minor beneficial (not significant), long term cumulative effect on construction employment due to the potential for the committed developments to generate a considerable amount of construction employment (in addition to the proposed development).

During Operation

- 10.137 All of the cumulative schemes have been assessed during the operational phases due to the effects on the same target economic areas. While detailed information regarding the amount of employment floorspace to be generated by these cumulative schemes is not available, a high-level assessment suggests that gross direct employment resulting from the cumulative schemes may be upwards of 5,000 jobs. Thus, there will be an overall permanent beneficial, long term cumulative effect on employment within the North West.
- 10.138 The cumulative schemes together with the proposed development, assuming they are built and complete, will approximately provide a combined 1,883 new homes in Manchester. This accounts for approximately 5.2% of the total housing target as identified in the Manchester Housing Strategy (MCC, 2022). Thus, there will be an overall permanent moderate beneficial (significant), long term cumulative effect on housing within the North West.
- 10.139 Residents within the proposed development and the cumulative developments will put additional demand on existing social infrastructure. Current provision would be inadequate to meet the demand arising from the high number of residential units coming forward. However, given the identified housing need in policy documents and the absence of identified capacity issues, it is expected that planning policy will continue to ensure that there is sufficient investment into the necessary services and infrastructure to accommodate the demand of additional users. In addition, it is likely that other residential developments may make financial contributions to contribute towards increased capacity to deal with the demand for primary healthcare, education and other social infrastructure, wherever necessary to supplement the provision planned within the committed developments. Therefore, the cumulative schemes are likely to have a negligible effect on social infrastructure provision.
- 10.140 The increase in residential units arising from the cumulative developments will increase demand for open and play space and put pressure on existing provision. However, the cumulative schemes are expected to include additional green infrastructure, play space and open space which is playable in nature (either on site or off site) that will accommodate their own demands (i.e. the demand arising

from each individual scheme). The cumulative developments will therefore have a negligible effect on open and play space provision.

SUMMARY & RESIDUAL EFFECTS

- 10.141 The proposed development is assessed to have an overall beneficial effect on the local population, increasing economic activity through additional local spending and provision of new homes.
- 10.142 Table 10-20 summarises residual effects of the proposed development during demolition/construction and Table 10-21 summarises the residual socio-economic effects of the proposed development during operation.

Table 10-20: Summary of effects during demolition and construction

Receptor	Effect	Significance before mitigation	Supplementary Mitigation	Residual Effect Significance
Regional Workforce	Low	Up to 33 FTE direct, indirect and induced temporary jobs created during the construction phase within Manchester City.	None required	Minor Beneficial, Temporary (not significant)

Table 10-21: Summary of effects during operation

Receptor	Effect	Significance before mitigation	Supplementary Mitigation	Residual Effect Significance
Local businesses	An increase in residential population could lead to additional local spending	Moderate beneficial, Permanent (significant) at the local level. Minor beneficial, Permanent (not significant)	None required	Moderate beneficial, Permanent (significant) at the local level Minor beneficial, Permanent (not significant) at all other spatial scales
Local employment	Generation of 10 net additional jobs once complete and operational.	Minor beneficial, Permanent (Significant)	None required	Minor beneficial, Permanent (Significant)
Local and borough residents	Provision of up to 154 new units of different sizes.	Moderate beneficial, Permanent (Significant)	None required	Moderate beneficial, Permanent (Significant)
Local and borough residents	Provision of up to 31 new affordable units of different sizes.	Moderate beneficial, Permanent (Significant)	None required	Moderate beneficial, Permanent (Significant)
Local children & young people	The proposed development could lead to demand for an additional up to 28 primary school places. The baseline assessment indicates there is sufficient capacity to accommodate this increase in demand.	Negligible	None required	Negligible

Receptor	Effect	Significance before mitigation	Supplementary Mitigation	Residual Effect Significance
Local children & young people	The proposed development could lead to demand for an additional up to 11 secondary school places. The baseline assessment indicates there is sufficient capacity to accommodate the increase in demand.	Negligible	None required	Negligible
Local residents	The proposed development could lead to an additional up to 335 people requiring healthcare through GP services. The baseline assessment indicates that the rising demand for the proposed development could be fully met locally based on existing GP per patient ratios.	Negligible	None required	Negligible
Local residents	Up to an additional 335 people could reside in the local area as a result of the proposed development, increasing the pressure on green space. The proposed development provides for 0.033 ha of green and open space.	Negligible	None required	Negligible
Local children & young people	The proposed development could lead to an additional 80 children in the area, requiring 0.027 ha of play area. The site is within proximity to areas designated for children and young people. In addition, the proposed development will provide 0.033ha of amenity space.	Negligible	None required	Negligible

REFERENCES

- Arc. (2010). 2010 Housing Requirement and Demand Assessment .
- Frost, L. (2016). *Travel to Work-Manchester*. Manchester: Manchester City Council.
- GMCA. (2021). *Places for Everyone*. Manchester: GMCA.
- GMLEP. (2023, February 28). *Manchester's Economy Predicted to Be the UK's Third-Fastest Growing Between 2024 and 2026*. Retrieved from gmlep.com: <https://gmlep.com/insights/manchesters-economy-predicted-to-be-the-uks-third-fastest-growing-between-2024-and-2026>
- HCA. (2014). *Additionality Guide (fourth edition)*. UK: Homes and Communities Agency.
- HCA. (2015). *Employment Density Guide (Third edition)*. Homes and Communities Agency.
- IMD. (2019).
- Manchester City Council. (2012). *Manchester Core Strategy 2012 to 2027*.
- Manchester City Council. (n.d.). *School Finder*.
- Manchester City Council. (n.d.). *Schools, Education and Child Care*. Retrieved from [Manchester.gov.uk: https://www.manchester.gov.uk/directory/84/school_finder](https://www.manchester.gov.uk/directory/84/school_finder)
- MCC. (2012). *Manchester Core Strategy*. Manchester City Council.
- I.
- MCC. (2023b). *Labour Market and Recruitment*. Manchester: Manchester City Council.
- MHCLG. (2019). *Planning Policy Guidance*. MHCLG.
- MHCLG. (2019). *Planning Policy Guidance*. MHCLG.
- MHCLG. (2021). *National Planning Policy Framework*. MHCLG.
- MHCLG. (2023). *National Planning Policy Framework*. MHCLG.
- NHS. (2022). *Aggregated GP Practices*.
- ONS. (2020). *Annual Business Survey*. ONS.
- ONS. (2021). *Cheetham Profile* .
- ONS. (2021). *UK Business: Activity, Size and Location*. ONS.
- ONS. (2022). *Business Population Estimates for the UK and the Regions*. ONS.

- ONS. (2022). Household Deprivation Cheetham .
- ONS. (2023). *Regional gross value added (balanced) by industry: city and enterprise regions*. ONS.

11. TOWNSCAPE AND VISUAL IMPACT

INTRODUCTION

- 11.1 This Townscape and Visual Appraisal (TVIA) has been prepared by RBMP Ltd., a chartered Landscape Architecture practice.
- 11.2 RBMP Ltd. has been appointed by Benjamin Property Company Limited to carry out this TVIA for the erection of a stepped 15 and 25 storey mixed commercial and residential building, comprising up to 12,612 sq.m. (GIA) at One Park Place, Manchester ('The Proposed Development').
- 11.3 This assessment has been undertaken based upon information provided within the accompanying planning drawings prepared by Hodder + Partners Architects.
- 11.4 This TVIA has been undertaken as a stand-alone report based upon the guidance contained within the Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA)¹. It provides a narrative appraisal of The Proposed Development within the identified application site and surrounding study area.
- 11.5 The format of this TVIA is based on the principles set out in the Guidelines for Landscape and Visual Impact Assessment Third Edition², the Landscape Character Assessment Guidance for England and Scotland³ and National Character Area Profile⁴. A detailed methodology is provided within the corresponding chapter and guides the assessment of potential effects of The Proposed Development within the Site on surrounding landscape and visual receptors.
- 11.6 Viewpoint photographs have been presented in accordance with the Landscape Institute's Advice Note TGN Visual Representation 06/19⁵.

RELEVANT LEGISLATION & GUIDANCE

Introduction

- 11.7 Aspects of planning guidance and policy, which are of particular relevance to this TVIA, are examined below.

International Legislation

1.1 _____

1.2

¹ Landscape Institute and Institute of Environmental Management and Assessment, 2013

² Landscape Institute and Institute of Environmental Management and Assessment, 2013

³ Former Countryside Agency and Scottish Natural Heritage, 2002

⁴ Natural England, 2013

⁵ Landscape Institute, 2019

- 11.8 The European Landscape Convention (ELC)⁶, which was signed by the UK in February 2006 and became binding in 2007, is the first international convention to focus specifically on landscape issues and aims to protect, manage and plan landscapes in Europe.
- 11.9 The ELC highlights the importance of developing landscape policies dedicated to the protection, management and creation of landscapes, and establishing procedures for the general public and other stakeholders to participate in policy creation and implementation.
- 11.10 The ELC defines landscape as “an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors”⁷.

National Legislation

- 11.11 This report takes into account the legislation and policy relevant to landscape and visual amenity, and the relevant ecology and cultural heritage including the following documents listed under the respective headings below.

NATIONAL PLANNING POLICY FRAMEWORK

- 11.12 The National Planning Policy Framework (NPPF)⁸ is a material consideration and provides guidance for national and local planning. At the heart of the NPPF is a presumption in favour of sustainable development, which forms the basis of plan-making and decision-taking.
- 11.13 The NPPF sets out three objectives in order to achieve sustainable development – economic, social and environmental. The environmental objective is relevant to this report. Particularly relevant is the requirement to “*contribute to protecting and enhancing our natural, built and historic environment*”.
- 11.14 The NPPF provides the national policy approach to delivering sustainable development. The material planning considerations of relevance to this TVIA are summarised as:
- Section 12 Achieving well-designed places highlights the importance of creating high quality and beautiful buildings and places which are a key aspect of ensuring development is sustainable. Developments should add to the overall quality of an area, should be visually attractive with regards to architecture, layout and landscaping, should be sympathetic to local character and establish or maintain a sense of place.
 - Section 16 Conserving and Enhancing the historic environment sets out the approach to heritage assets identifying that they are an irreplaceable

1.1 _____

1.2

⁶ Council of Europe, 2004

⁷ Council of Europe, 2004

⁸ Ministry of Housing, Communities and Local Government, 2021

resource and should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations. This section goes on to state that local planning authorities should look for opportunities for new development within Conservation Areas and World Heritage Sites, and within the setting of heritage assets, to enhance or better reveal their significance.

NATIONAL DESIGN GUIDE

- 11.15 The National Design Guide (NDG)⁹ has been published to expand on the design policies set out in the NPPF providing a framework to assess proposals against in terms of achieving well designed places.
- 11.16 One of the key components identified in the NDG that needs to be considered to ensure good design is landscape. When addressing the identity of a place, characteristic I1 identifies the importance of landscape setting and backdrop in order to respond effectively to local identity.
- 11.17 A key part of the NDG assessment relates to context and how well-designed places need to be integrated into their surroundings so they relate well to them along with being influenced by and influencing their context positively¹⁰. Characteristic C1 emphasises the need to respond appropriately to landscape character in order to provide positive new developments.

LOCAL PLANNING POLICY

- 11.18 The application site is located within the administrative jurisdiction of Manchester City Council who are also the Local Planning Authority (LPA.) The Manchester Core Strategy was adopted in 2012. In addition, a number of policies within the previous Unitary Development Plan have been saved and are still relevant material planning considerations. Of particular note are the Strangeways Local Plan (2009) and importantly The Great Ducie Street Strategic Regeneration Framework (2018), both of which set out the ongoing regeneration plan for the area.
- 11.19 These four documents therefore form the development plan for the area.
- 11.20 A summary of the key aspects of the local planning policies that are considered relevant to the townscape and visual assessment are presented below.
- 11.21 It should be noted that a development plan, Places for Everyone, has been prepared jointly by nine districts including Manchester City and has recently been submitted for examination by the Planning Inspectorate. The plan includes 'The growth potential of the Core Growth Area [City Centre] through higher density

1.1 _____

1.2

⁹ Ministry of Housing, Communities and Local Government, National Design Guide, January 2021

¹⁰ Ministry of Housing, Communities and Local Government, National Design Guide, January 2021, p10

development, building in opportunity areas, and improving the connections to other areas of Greater Manchester'¹¹

MANCHESTER'S CORE STRATEGY DEVELOPMENT PLAN DOCUMENT 2012

11.22 The Core Strategy sets out a vision for Manchester up until 2027. Part of the vision includes 'a City defined by excellence in urban design and environmental quality, where its distinctive historic environment is understood, valued, cared for and its potential fully realised'.

11.23 The Core Strategy sets out a range of objectives that it seeks to achieve through sustainable development. Of note is Objective S06 which is:

'Protect and enhance both the natural and built environment of the City and ensure the sustainable use of natural resources, in order to mitigate and adapt to climate change, support biodiversity and wildlife, improve air, water and land quality, recreational opportunities and provide networks of high quality green infrastructure, ensuring that the City is inclusive and attractive to residents, workers, investors and visitors.'

11.24 Key policies within the Core Strategy that are relevant to this assessment are identified below.

11.25 **Policy EC3 – The Regional Centre.** This policy sets out the uses appropriate in areas identified as Regional Centres and states:

'Within the Regional Centre development for employment generating uses including offices and other commercial development will be encouraged. Office developments will be appropriate providing that They are in locations which are well connected by sustainable transport to both the City Centre and residential areas'

11.26 The Site is identified on the Interactive Policy Map as being within the City Centre Development Strategy area, the following are relevant policies from this section of the Core Strategy.

11.27 **Policy CC1 – Primary Economic Development Focus: City Centre & Fringe.** This Policy sets out the approach to development in the City Centre area. It states that, 'the City Centre and fringe will be considered a suitable location for the consideration of high density buildings and commercially led mixed use schemes'. The Site is in the City Centre North area on Figure 8.2 which sets out the City Centre and Fringe areas.

1.1 _____

1.2

¹¹ Places for Everyone, Joint Development Plan Document, August 2021, p26

- 11.28 **Policy CC6 – City Centre High Density Development.** This policy provides support for high density office provision in the City Centre Area and states:

'City Centre development will generally be high-density. It is a location where land should be used to maximise its efficiency. The appropriate scale, massing and height of development in the City Centre will significantly exceed what is appropriate elsewhere in the City. Development will need to have regard to the Council's approach to tall buildings (policy EN2), but any proposals which do not reflect the importance of maximising the development opportunities in the City Centre will only be supported where this accords with wider Core Strategy objectives.'

- 11.29 **Policy CC8 – Change and Renewal.** This policy supports the provision of large scale schemes in the City Centre, subject to the proposal's impact on key aspects of the City's heritage and character. It goes on to state that 'new development should fully exploit opportunities to contribute to the improvement of the City Centre in terms of character and function, taking account of other policies in the Core Strategy'.

- 11.30 **Policy CC9 – Design and Heritage.** This policy sets out the approach to considering the design and heritage implications of a scheme. It states:

'Design of new buildings will need to be of the highest standard in terms of appearance and function. The standards and guidance explained in other LDF policies should be the basis for the approach to design, with particular attention to be given to the City Centre context and character.'

Development in Manchester City Centre should preserve or enhance the heritage assets that have been identified, including listed buildings, conservation areas and scheduled ancient monuments.

The Council will support high density and mixed use development in the City Centre, but developers must recognise the specific design challenges that must be overcome to ensure complementarity of function and form. New development must support the range of uses the Council expects in the City Centre and contribute to a coherent and integrated physical environment.'

- 11.31 Section 12 of the Core Strategy confirms that Manchester has significant opportunities for growth over the next 15 years, but that *'the future success of the City depends not on the level of development it fosters but on the quality of place that emerges as a result'*.

- 11.32 Place Making and Design are identified in the justification text to the environmental policies that follow and provide the following principles that are expected in the submission of schemes:

- Character: a place with its own identity;
- Continuity and enclosure: a place where public and private places are clearly distinguished;

- Quality of the public realm: a place with attractive, and successful outdoor areas;
 - Ease of movement: a place that is easy to get to and move through;
 - Legibility: a place that has a clear image and is easy to understand;
 - Adaptability: a place that can change easily;
 - Diversity: a place with variety and choice.
- 11.33 **Policy EN1 – Design Principles and Strategic Character Areas.** Through a Character Study the Manchester City area has been divided into eleven different areas to inform the local character and distinctiveness of place and landscape. The justification text states that *'new development in Manchester will be expected to take into consideration its location within the specific character areas and reinforce the sense of place and local distinctiveness of the City'*.
- 11.34 The Site is located within the City Centre Character Area and the policy reflects on heritage and established patterns of density. It also provides three key considerations:
- Developers will be expected to consider the City's heritage and continue the rich pattern of activity in the core area;
 - While there will be opportunities to create landmark buildings, developments should also contribute positively to the experience of all at street level;
 - Wherever possible the opportunity should be realised to enhance existing and provide new areas of meaningful open space, and the maintenance and improvement of the City's permeability should be considered in all proposals.
- 11.35 **Policy EN2 – Tall Buildings.** This policy defines tall buildings as 'buildings which are substantially taller than their neighbourhoods and/or which significantly change the skyline'. The policy sets out that in order to support proposals for tall buildings a scheme must be of excellent design quality, appropriately located, contribute positively to sustainability, contribute positively to placemaking principles and bring with it regeneration benefits.
- 11.36 **Policy EN3 – Heritage.** This policy sets out the approach to the preservation and enhancement of the historic environment and states that:
- 'New developments must be designed so as to support the Council in preserving or, where possible, enhancing the historic environment, the character, setting and accessibility of areas and buildings of acknowledged importance, including scheduled ancient monuments, listed buildings, registered parks and gardens, conservation areas and archaeological remains.'*
- 11.37 **Policy EN9 – Green Infrastructure.** This policy sets out that new development will be expected to maintain existing green infrastructure in terms of its quantity, quality and multiple function and requires mitigation strategies if existing green infrastructure is to be lost. Key points set out in the policy are that the protection of

existing street trees, the promotion of new planting and the provision of green roofs and walls will be supported.

- 11.38 **Policy DM1 Development Management.** This policy provides a range of key issues for consideration in the assessment including the impact on the surrounding areas in terms of the design, scale and appearance of The Proposed Development. In addition, effects relating to biodiversity, landscape, archaeological and built heritage are also highlighted.

SAVED UNITARY DEVELOPMENT PLAN POLICIES

- 11.39 The relevant saved policies from the Unitary Development Plan are set out below.
- 11.40 **Policy DC18.1 – Conservation Areas.** This policy supports the preservation and enhancement of conservation areas. The views into and out of conservation areas are also identified as a key issue to be considered.
- 11.41 **Policy DC19.1 – Listed Buildings.** This policy sets out the approach to the preservation of listed buildings and confirms that the setting of such heritage assets is also a key consideration in the assessment of proposals.
- 11.42 **Policy E3.3 – Environmental Improvement and Protection.** This policy states that 'the Council will upgrade the appearance of the City's major radial and orbital roads and rail routes. This will include improvements to the appearance of adjacent premises; encouraging new development of the highest quality; and ensuring that landscape schemes are designed to minimise litter problems'.

GUIDE TO DEVELOPMENT IN MANCHESTER SUPPLEMENTARY PLANNING DOCUMENT AND PLANNING GUIDANCE 2007

- 11.43 The Guide to Development in Manchester (Guide) does not create new planning policy but rather expands on and provides further detail on existing planning policies. It was initially published in support of the Unitary Development Plan.
- 11.44 The aim of the document is to 'provide guidance which will help to develop and enhance an environment within Manchester which is visually attractive, has a unique and positive sense of place and which properly caters for the functions which it accommodates both now and in the future'.
- 11.45 With regard to context the Guide states that 'a high quality environment is created by buildings which reflect their purpose and respect the place in which they are located' and that 'each new development should be designed having full regard to its context and the character of the area'. Heritage is identified as a particular consideration that needs to be responded to through the design process.
- 11.46 The need to create a sense of place is highlighted as an important part of quality design, and the Guide states that 'it will be important to ensure that the development of new buildings and surrounding landscape relates well to, and helps to enhance, areas that are likely to be retained and contributes to the creation of a positive identity'.

11.47 With regard to continuity and enclosure the Guide states that buildings should front onto the street and relate well to each other. With regard to the height of proposed buildings it states that *'it is important that new developments are of an appropriate height having regard to location, character of the area and specific site circumstances and local effects, such as microclimatic ones'* and in particular *'where higher structures are more appropriate, notably in and around the City Centre, they must be informed by all of the principles described in the Guide'*.

11.48 With regard to legibility, the Guide states that:

'Vistas enable people to locate key buildings and to move confidently between different parts of the neighbourhood or from one area to another. The primary face of buildings should lead the eye along important vistas. Views to important buildings, spaces and landmarks, should be promoted in new developments and enhanced by alterations to existing buildings where the opportunity arises. Gaps between buildings should not distract from the major view along a street. Signage can be used positively to enhance legibility in new developments and if appropriately located and designed can be particularly helpful for visitors and users of large complex schemes.'

11.49 The Guide goes on to state that good design is an essential requirement of new schemes and that the Council *'encourage developments which are "designed for place" not simply for purpose, and overly corporate designs will be discouraged'*.

11.50 With particular reference to tall buildings the Guide states:

'It will always be important for the City to be able to accommodate new interest and activity in its different forms, including tall buildings. There is now much more interest in these types of developments than there has been for many years, and this is a great indication of the strength of the City Centre economy. Schemes will be considered on an individual basis, by reference to their appearance, their impact on the immediate area and the effect on the City's skyline. Key questions will be the quality and interest of the roofline; the design of the lower floors; the relationship to the surrounding streets; the impact of servicing and parking requirements; the microclimate, including overshadowing and air turbulence effects, created by the relationship of the building to those adjacent; and the quality and usability of the spaces surrounding the building.'

11.51 Key issues identified for design in the City Centre include:

- Street layout - the most dominant design characteristic of the City Centre is the grid pattern of streets. This grid is not a regular rectangle, but has a fanlike shape which is open to the north and converges to the South around G-MEX. This results in variety in the size and shape of the blocks, and it is important that this variety and permeability is not compromised by new developments that propose the closure of roads.
- Angle - the changes in angle within the City's streets and the consequential alignment of building blocks gives an added importance to those buildings located at road junctions. Although there are no deliberately designed grand

axial views, the grid system of streets allows for long vistas in different parts of the City Centre. Some of these views have been terminated with buildings that are designed to be different from those that simply form the "street wall"; new developments should continue to exploit this characteristic.

- Building lines - subtle variations in building lines create variety and interest in the City's street frontages which should be respected. Buildings were erected to the back of pavement and corners were emphasised as they could be viewed from more than one street. New developments should recognise these characteristics, but in a contemporary manner.
- Watercourses - Manchester's City Centre is located on three rivers: the Irwell, Medlock and Irk, and three canals: Rochdale, Bridgewater and Ashton. These waterways possess particularly attractive visual and commercial qualities. The buildings and structure associated with these areas were of a contrasting character compared with those in the commercial heart of the City Centre, often displaying heavier, rounded and robust detailing. New development in these areas should recognise these contrasting urban forms.
- Views - the City Centre possesses many interesting buildings and structures, which help to orientate visitors; this is as true of the rail viaducts across Castlefield as it is of buildings such as the Cathedral and the Town Hall. Views of landmark buildings need to be protected. Such buildings include those which are tall, substantial or obviously different from their neighbours (eg CIS, Midland Bank, G-MEX), those which have a unique setting (eg St Ann's Church, Friends Meeting House) and those which mark or terminate an attractive view (eg Minshull Street Law Courts, Central Reference Library).
- Tall Buildings: the location and design of tall buildings need careful consideration as they can be viewed from longer distances and have an impact on a much wider area, both within and outside of the City Centre. The effect of tall buildings is significant in a City Centre where its conservation area status means that the relationship of buildings and spaces is as important as the quality of individual buildings. Tall buildings provide positive messages about Manchester and can significantly improve its image and peoples' perceptions of it. Conversely, poorly located tall buildings could have an adverse effect and as such any proposals will always have to be fully justified and carefully considered.
- Topography - in common with other British cities, 20th century developments in Manchester have tended to ignore natural variations in ground level. The interest created by changes in ground level has been removed by the imposition of artificial decks and by developments containing long horizontal lines. Regaining these changes in level and reinforcing Manchester's natural topography should be a consideration in the design of proposed developments.
- Architectural Styles – Chetham's Library is the only medieval building of this period, but both domestic and civic buildings exist from the Georgian era. The most dominant architectural styles in the City Centre are Victorian and Edwardian. Although different in form, most buildings of these periods exhibit similar characteristics: subdivision of elevations; emphasis on the corners of buildings; vertically proportioned windows with deeply recessed glazing. Building materials include sandstone, terracotta and glazed brick, but the most common was a red-orange brick. Vertical rhythms were created along the

City's street by chimneys or other architectural features that projected above the main elevation. These characteristics have been re-used in a contemporary manner in recent years, allowing new buildings to sit comfortably with their Victorian and Edwardian neighbours.

- Street Level Activity - increasing interest in the City's history and in its commercial and retail attractions has brought about an increase in the number of visitors. This in turn demands that greater attention must be paid to the ground floor of buildings, where active uses should be seen by passers-by, and to the design of street surfaces and the public domain in general.

THE STRANGWAYS LOCAL PLAN

- 11.52 The Strangeways Local Plan was published to address the economic and physical issues of the area across a 10-15 year period. It should be noted that the economic context for Manchester has changed considerably in the intervening time since publication. As such, The Great Ducie Street Strategic Regeneration Framework (SRF) 2018 (see below), was published to build on and update the guidance for the area.
- 11.53 Strangeways is described within the Local Plan as an area that already makes an important contribution to employment in Manchester – it hosts the city's highest concentration of business outside the city centre. Most of the businesses are classified as small businesses that benefit from the low cost-base.
- 11.54 Whilst the area is not in major decline there is a concern that its reliance on wholesale and distribution businesses means that it is susceptible to decline due to market changes such as direct marketing and e-commerce. The area's overall image is industrial with poor quality units. This image limits the ability of Strangeways to interact positively with the city centre and benefit from the spread of development away from the centre.
- 10.143 The broad vision for Strangeways is for it to be a key employment, cultural and training destination in proximity to the city centre accommodating a broad range of business activities.
- 11.55 More specifically, the 2018 SRF area falls within 'City Fringe' and 'Riverside' neighbourhoods as designated in the Strangeways Local Plan. The overall vision for these neighbourhoods is that it be redeveloped as an employment-led, mixed use and vibrant neighbourhood contributing to the revitalisation of the City Centre North.

THE GREAT DUCIE STREET STRATEGIC REGENERATION FRAMEWORK (2018)

- 11.56 The Great Ducie Street Strategic Regeneration Framework (SRF) provides a clear strategy for the redevelopment of the area northwards from Manchester's Inner Ring Road adjacent to the Manchester Arena. The guidance notes that the area presents a prime opportunity for regeneration and has been identified as a priority in a number of previous documents, including the North Manchester Regeneration Framework and Strangeways Local Plan.

- 11.57 The Site is located at the north-eastern corner of the SRF area (Plot 60) and as such is considered as an opportunity for a high quality landmark building between 20-29 stories, creating a clear marker along Cheetham Hill Road.
- 11.58 The SRF goes on to say:
- Traditionally, the area has been a focal point for textiles businesses, wholesalers and distributors; however lack of investment has resulted in a poor quality local environment. The location immediately at the edge of Manchester city centre adjacent to Victoria Station and the Manchester Arena, positions the SRF area as an outstanding opportunity to further support the positive growth trajectory of Manchester that has been established in recent years. Overall, the SRF area represents an opportunity to create a genuinely mixed use neighbourhood with a strong sense of place and community
 - New housing should contribute to the city centre's needs in terms of ensuring a balanced housing supply. Given the opportunity to significantly increase land value, over and above existing low quality industrial use through higher density development and residential uses, it will be expected that new developments deliver through planning gain the environmental and infrastructure requirements of the area as well as affordable housing.
 - The SRF proposes a number of design principles to govern future development. These clear development principles will focus on: an enhanced economic role for the area; providing high quality, sustainable new homes; and contributing to a balanced housing supply. The Framework sets out a number of area wide principles and objectives, summarised below:
 - Increasing the density of development in cities is crucial to provide sustainable growth, long term economic competitiveness, vibrancy, and the opportunity to incorporate multiple land uses.
 - New buildings should be designed to support active frontages, particularly around key public spaces and pedestrian desire lines, to promote street life and enhanced animation to the street scene.
 - The Site itself falls within the Cheetham Hill Gateway area of the SRF. Development within this Character Area is envisaged to be predominately residential-led rather than commercial. Commercial development at ground floor level may be considered acceptable; however, commercial-led development will not be considered acceptable unless approved at the discretion of the Local Planning Authority.
 - Development at prominent corners of the Character Area will be suitable for landmark development for buildings of scale. These will need to be designed to the highest quality and respond to the site's context.
 - Cheetham Hill Road and Trinity Way frontages should be designed to present an active frontage. In urban design terms, proposals should deliver an attractive and interesting development that adds interest on this key route.

ASSESSMENT METHODOLOGY & SIGNIFICANCE CRITERIA

- 11.59 The Townscape and Visual Impact Assessment (TVIA) and supporting studies and surveys were conducted in accordance with the principles set out by *Landscape Character Assessment Guidance for England and Scotland* (CA and SNH, 2002) and *Guidelines for Landscape and Visual Impact Assessment 3rd Edition* (LI and IEMA, 2013).
- 11.60 GLVIA 3 defines townscape as “areas where the built environment is dominant... including the buildings, the relationships between them, the different types of urban open spaces, including green spaces, and the relationship between buildings and open spaces”. Townscape, like landscape, is a combination of both cultural and physical characteristics or components that give rise to patterns that are distinctive to particular localities and help to define a ‘sense of place’. The townscape character is an interaction of influences including topography, land use and management, historic and cultural associations together with built form and its relationship with the surroundings.
- 11.61 Townscape and visual assessments are two separate but interlinked processes that are undertaken in parallel. The assessments are informed by a combination of desk and site based appraisal techniques and professional judgements.
- 11.62 The townscape assessment considers the effects of The Proposed Development on the physical townscape and landscape, which may give rise to changes in its character, and how this is experienced; separately considering the effects of development on:
- Defined Townscape Character Zones (in order to consider variations and contrasts in surrounding land use pattern and built form);
 - Designated townscape resources (sites designated and protected under legislation and local policy).

Stages in Townscape and Visual Impact Assessment

- 11.63 The TVIA process comprises the following stages:
- Baseline assessment: record and analyse the existing nature and value of the townscape character and features, and visual amenity of the study area through desk and field based appraisal;
 - Description of the nature, forms and features of The Proposed Development including and constraints and opportunities;
 - Assessment of sensitivity of the existing townscape and identified visual receptors to change;
 - Identification of potential townscape and visual impacts due to The Proposed Development;
 - Identification of proposed mitigation measures appropriate to the development and its townscape context;

- Assessment of the magnitude of effect upon the identified receptors, likely to result from implementation of The Proposed Development;
 - Assessment of the significance of the residual effects on townscape and visual resource, taking into account appropriate mitigation.
- 11.64 The assessment process is iterative; the analysis of the baseline conditions and evaluation of the potential effects resulting from a development informs the evolution of The Proposed Development. It is, therefore, important to take into consideration the mitigation that is inherent or proposed as part of the development in order to assess the residual effects and their significance.
- 11.65 The assessment process is recorded in two principal stages: a baseline study of the existing landscape and surrounding visual receptor groups, followed by the impact assessment.
- 11.66 The visual assessment considers the potential changes that would occur to available views in the townscape as a result of the development proposals, the resultant effect on visual amenity and people's responses to the changes.
- 11.67 The TVIA comprises, firstly the identification, understanding and description of the existing townscape and visual baseline conditions (townscape receptors and groups of views likely to be impacted by The Proposed Development within a defined study area) and secondly the identification and description of the impacts arising from the development on the townscape and the visual receptors.
- 11.68 The assessment examines both construction phase impacts and impacts on completion of the proposed scheme including mitigation strategy. The impacts are assessed based on professional judgements and an understanding of the construction phases and phasing of completion, which are summarised in the TVIA and include any proposed townscape and visual mitigation works.

Study Area

- 11.69 Consultation with the LPA alongside published guidance provides recommendations on the extent of the Zone of Theoretical Visibility that should be produced to assess the area that would potentially experience significant visual effects.
- 11.70 The purpose of the TVIA is to identify significant landscape/ townscape and visual effects. It is, therefore, reasonable to limit the study area in various respects to meet the requirements of the specific project and its landscape context and to reflect the likelihood of significant effects arising over very long distances. It is also important that the more significant effects occurring over shorter distances are given appropriate emphasis. This report has adopted the following approach:
- The focus of the visual assessment, identification of receptors and the selection of representative viewpoints is generally limited to 2km from the application site. The study area is defined as extending approximately 4.5km northeast to include an area of elevated and open landscape, otherwise 2km. Approximately 2km south, east and west of the application site, in order to ensure an adequate focus on potentially significant effects;

- Effects on townscape character areas and designations are considered within the study area; limited by the 2km study area. This is based on professional experience of residential and mixed-use development assessment, that visibility over greater distance does not have the potential to result in significant changes to the townscape character or value in the local landscape context. The key characteristics of the immediate landscape to the application site will be assessed up to 2km in order to understand how this corresponds with those characteristics identified within existing character assessments. Views were identified beyond this, especially due to the height of the proposal, however effects were judged to be less significant from beyond this area.

- 11.71 The TVIA focusses on potentially significant townscape and visual effects likely to occur within the localised study area and those features within it. This is considered appropriate in the surrounding landscape context, where the combination of the topography with the vegetative land cover and most significantly, built form, would restrict significant townscape and visual effects.

Field Observations

- 11.72 For the purpose of informing the assessment, desk top study on the site and its surrounding areas have been undertaken to survey any potential receptors and key views.
- 11.73 Photographs illustrating views from a selected series of viewpoints have been taken using a Canon EOS digital camera set to a 50mm focal length. Viewpoint photographs have been presented in accordance with the Landscape Institute's Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment.
- 11.74 Field survey visits were undertaken during May 2022 for the initial development of the photo viewpoint locations. The baseline views were recorded on 17 May 2022 for the production of the baseline information and completing the verifiable views.
- 11.75 Specific methodologies relating to verified photography and the production of computer modelled photo montages is detailed within Appendix C.

Landscape Sensitivity

- 11.76 Landscape is a combination of both cultural and physical components that give rise to patterns that are distinctive to particular localities and help to define a 'sense of place'. Landscape character is defined by the interaction of influences and components such as landform, hydrology, vegetation, landcover, land use pattern and cultural features and associations, and their relationship with the surroundings.
- 11.77 Although landscape has some intrinsic sensitivity, different landscape receptors have different elements and features that can accommodate a variety of development types. To reliably inform detailed assessment of impacts, landscape sensitivity needs to be determined with reference to the changes arising from a specific type of development. Therefore landscape sensitivity is assessed combining judgments on the value attached to a landscape and the susceptibility to the type of change or development proposed.

- 11.78 Landscape value is the relative value attached to a potentially affected landscape. Landscape value is relative in relation to the different stakeholders and different parts of society that use or experience a landscape. Factors that have been considered in making judgments on landscape value include designations (both national and local), local planning documents, status of features (eg. TPO's or Conservation Areas) and local community and interests (for example local green spaces, village greens or allotments). Landscape value will vary in response to the specific landscape that is being considered.
- 11.79 The value is assessed as **high, medium or low** and the assessment is made based on the following factors:
- The quality placed on the landscape, including the scenic quality;
 - The presence of rare elements or features, or rare landscape character types;
 - Whether the landscape contains a particular character and/or features or elements considered to be particularly important examples;
 - The presence of nature, historical or cultural features of interest;
 - Evidence that the landscape is important for recreational users;
 - Perceptual aspects, such as tranquillity or wildness;
 - Associations of the landscape with particular people in history (such as artists or writers), or historical events, that contribute to the perception of natural beauty.
- 11.80 The second component of landscape sensitivity relates to susceptibility. Landscape susceptibility to change is the ability to accommodate change without undue consequences for the maintenance of the baseline situation. In this context, the term landscape receptors can be expanded to cover overall character areas, condition or a particular landscape character type or an individual landscape element or feature. Landscape susceptibility will vary in response to the specific landscape that is being considered and to the nature of the type of change that may occur.
- 11.81 To assess landscape susceptibility it is important to appreciate the key characteristics and attributes of the landscape of the application site and surrounding study area, in order to understand local landscape variations and if the landscape of the application site fits with the description of the LCT/LCA that it is within.
- 11.82 The characteristics of the landscape that should be considered with regard to their susceptibility to change include a variety of attributes, such as scale and enclosure, landform, nature of land use, nature of existing elements or nature of existing features. Landscape susceptibility is described on the verbal scale as **high, medium or low**.
- 11.83 Sensitivity is a term applied to specific receptors, combining judgments of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor. Receptors can include specific

elements of features or may be judged at a wider scale and include landscape character parcels, types or areas.

- 11.84 The consideration of value of the landscape receptor combined with susceptibility to the type of change arising from the proposal, allows for assessment of sensitivity of the landscape receptor. The sensitivity of landscape receptors is categorised as high, medium or low; the criteria for each category is outlined in Table 11.1.

Table 11.1: Sensitivity of Landscape Receptors

Receptor Sensitivity	Guide on typical criteria
High	A landscape of particularly distinctive character and high or exceptional scenic quality. Strong representation of the typical landscape character type. Intact landscape with excellent condition of elements and features. Presence of rare features in the landscape. National and/or regionally designated landscape for its scenic quality and character, such as an Area of Outstanding Natural Beauty (AONB) or National Park. High recreational value with strong cultural and historical associations. High susceptibility to changes arising from the proposal.
Medium	A landscape of moderately distinctive character and scenic quality. Typical landscape character type is apparent. Relatively intact landscape with occasional features of interest. Locally designated for its quality and character. Receptor of higher value but lower susceptibility to the type of change or development, or vice versa.
Low	A landscape of no distinctive character or scenic quality or is damaged, neglected or of poor character and lacking scenic quality. Landscape has become eroded with no more than occasional elements and features of interest. Not subject to any form of landscape designation. Receptor of low value and low susceptibility to the type of change arising from the proposal.

Magnitude of Landscape Change

- 11.85 Once the sensitivity of the landscape receptors has been determined, the effect that The Proposed Development will have on the landscape resource can be assessed.
- 11.86 The effect on landscape receptors is assessed in relation to the size or scale of impact, the geographical extent or the change and the duration and the reversibility of the impact.
- 11.87 The magnitude of landscape change effect from The Proposed Development on landscape character or designations is appraised, taking into account each phase

(construction and completion) of The Proposed Development and any inherent / proposed mitigation. The assessment of the magnitude of effect takes into account the following factors:

- The degree to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by addition of new ones, for example removal of hedges may change the smallscale, intimate landscape into a large-scale, open one, or introduction of new buildings or tall structures that may alter open skylines;
- The extent of existing landscape elements that would be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape;
- The scale of overall predicted change to character;
- The timescale or phasing of the construction stages;
- Whether the landscape change would be reversible or not.

11.88 The magnitude of effect is categorised as **high**, **medium**, **low** or **negligible**; the criteria for each magnitude is outlined in Table 11.2 below.

Table 11.2: Magnitude of Landscape Effects

Magnitude of Effect	Guide on Typical Criteria
High	The Proposed Development would cause a large, irreversible change to the existing landscape for a long time or permanently. Impact upon landscape features of international and national importance that would change the key characteristics of that landscape. Long-term or permanent change to existing landscape conditions.
Medium	The Proposed Development would cause a noticeable change to the existing landscape, however, only few elements and features that contribute to the overall character would be affected. Medium or short term change of landscape conditions. Moderate alteration of the individual components of the landscape leading to small change in aesthetic and perceptual aspects of the landscape.
Low	The Proposed Development would cause a small impact / change and would affect relatively few receptors. Temporary and reversible change in landscape conditions. The key characteristics of the landscape contributing to its character would not be significantly affected.
Negligible	The Proposed Development is appropriate in its context or barely perceptible. It may be difficult to differentiate from its surroundings and has very little or no impact on receptors compared to the baseline situation.

	No key characteristics of the landscape contributing to its character would be affected.
--	--

Visual Assessment

Tall Buildings – Historic England Guidance Note 4¹²

‘Towns and cities evolve, as do their skylines. Individually, or in groups, tall buildings can significantly affect the image, character and identity of towns and cities as a whole, and over a long period. In the right place well designed tall buildings can make a positive contribution to urban life. The purpose of this advice note is to ‘support all those involved in dealing with proposals for tall buildings in implementing historic environment legislation, the relevant policies in the National Planning Policy Framework (NPPF), and the related guidance given in the Planning Practice Guidance (PPG)’ . The process of consultation, where the involvement of local planning authorities and stakeholders is encouraged when making a planning application for a tall building. This guidance suggests:

The Identify the zones of visual influence of a proposal, which then help to understand the character of the areas that may be affected and determine which individual heritage assets are likely to be affected (this includes considering recognised views and the settings of heritage assets);

b. Guide and improve design. Design Review is an established tool for the assessment of impact at the pre-planning and planning application stages, and can inform the Design and Access Statement. The greater the impact, the more detailed and comprehensive the Design and Access Statement needed. The same is true in relation to the heritage assessment;

c. Understand what illustrative material is likely to be needed in terms of the quality, accuracy, clarity and detail, so that the impact of a tall building can be properly and objectively assessed’.

4.6 ‘Careful assessment of any cumulative impacts in relation to other existing tall buildings and concurrent proposals will also be needed to fully understand the merits of the proposal. The existence of a built or permitted tall building does not of itself justify a cluster or additions to a cluster. Where a proposal is promoted as part of a cluster, a successful design will have a positive relationship within the cluster; the altered impact of a cluster itself needs to be considered. The use of modelling and visual aids is recommended to fully assess a proposal’s impact on the surrounding area’.

4.10 ‘Given their likely impact on a wide area, it is important that social and environmental effects are also assessed. Consideration needs to be given to a tall building’s contribution to public space and facilities. This applies both internally and externally, including the provision of a mix of uses (especially on the ground floor of towers), as part of a well-designed public realm. Consideration of the impact on the local environment is also important, including

1.1 _____

1.2

¹² Tall Buildings. Advice Note 4. Historic England. December 2015

microclimate, overshadowing, nighttime appearance, light pollution, vehicle movements, the environment and amenity of those in the vicinity of the building, and the impact on the pedestrian experience’.

- 11.89 Following desk studies and site visits a range of visual receptors (people) that have a potential to be affected by The Proposed Development are identified. They may include local residents, users of footpaths and roads (motorists, cyclists), and users of recreational facilities, visitors to popular tourist attractions or people at their place of work.
- 11.90 Potential viewpoints and areas for investigation are then identified following an initial study of Ordnance Survey (OS) maps, analysis of Zone of Theoretical Visibility and, most importantly, site visits. Viewpoints and areas of further investigation are identified based on the following criteria:
- Distance from the application site to the receptor;
 - The proportion of the application site / proposed development visible, as well as the absolute visibility of The Proposed Development;
 - The height of The Proposed Development relative to the receptor with reference also to the scale of other features in the view;
 - The number and character of elements which would be lost from or added to the view;
 - High concentrations of viewers, such as settlements, local recreational facilities, public footpaths and attractions etc;
 - Views illustrating the visual character of the surrounding area; and
 - Areas identified as having a high potential for visual impact.
- 11.91 A site visit was carried out on 10th August 2023 to assess general landscape character and views experienced by different types of visual receptors during the day. Photographs were taken to represent the surrounding visual receptors. Following desktop research to understand the surrounding potentially sensitive receptors, a selection of viewpoints was made to represent key relevant visual receptor types likely to be affected by The Proposed Development, such as residents of nearby properties, users of Public Rights of Way (PRoW), pedestrians or road users, to enable the assessment of the proposed change in views and the significance of effect on these receptors.
- 11.92 Photographs illustrating views from a series of representative viewpoints were taken using Nikon D600 FX Digital SLR camera. The photographs have been reproduced in a series of viewpoint sheets with annotation and details of the image recorded.

Visual Receptors

- 11.93 Visual receptors are groups of people, which include the public or community at large, residents, visitors and other groups of views. Study of OS data, production of a ZTV and consultation with the LPA are used to identify viewpoints for assessment

that best represent the visual receptors likely to experience an impact from The Proposed Development.

- 11.94 Representative viewpoints are validated through site visits, resulting in the repositioning or exclusion of some of the preliminary viewpoints, due to lack of visibility towards the application site.

Visual Sensitivity Criteria

- 11.95 Sensitivity of visual receptors (people), whose groups are represented by a selection of viewpoints, depends on the susceptibility of these receptors to change in views and the value attached to views experienced by these receptors.
- 11.96 The susceptibility of different visual receptors to changes in views and visual amenity is judged based on:
- The occupation or activity of people experiencing the view at particular locations; and
 - The extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular locations.
- 11.97 Judgements about the value of views take account of:
- Recognition of the value attached to particular views, for example in relation to heritage/cultural assets, or through planning designations; and
 - Indicators of the value attached to views by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment.
- 11.98 The sensitivity of visual receptors is categorised as high, medium or low, as defined in Table 11.3.

Table 11.3: Criteria for assessing sensitivity of visual receptors

Visual Receptor Sensitivity	Guide on Typical Criteria
High	People with a particular interest in their surroundings or with prolonged viewing opportunities, examples include: Users of promoted viewpoints (often with interpretation boards); Users of tourist and visitor destinations including recreational or heritage sites (ornamental parks and open spaces); Users of recreational hilltops and peaks; Residential locations and occupiers of residential properties; People using important recreational facilities such as National Trails/Long Distance promoted routes and National Cycle Routes; Users of Paths and Rights of Way (PRoW) in nationally or locally designated landscapes

Medium	People with a general interest in their surroundings or with some viewing opportunities, examples include: Users of public open spaces and outdoor recreational spaces; Other public routes, and users of PRow; - Local viewpoints.
Low	People with a limited or passing interest in the surroundings, examples include: Users of more transitory routes, such as other public routes; Users of the local road network and major highways; People at their place of work; - Users of indoor facilities.

Magnitude of Visual Effect

11.99 For each of the identified group of receptors, the potential magnitude of the visual effect (in comparison to the existing 'baseline' situation) was assessed, taking into account each phase of The Proposed Development and any inherent / proposed mitigation. The magnitude of visual effect takes into account the following factors:

- The scale of change to the view with respect to loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by The Proposed Development;
- The degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics;
- The nature of the view of The Proposed Development, considering the relative amount of time over which it will be experienced and whether views will be full, partial or glimpsed;
- The degree of visual intrusion or obstruction that would occur;
- The distance of the viewpoint from The Proposed Development;
- The angle of the view in relation to the main activity of the receptor; and
- Duration and reversibility of the effect.

11.100 The magnitude of visual effects is categorised as **high**, **medium**, **low** or **negligible**.

Table 11.4: Magnitude of Visual Effects

Magnitude of Effect	Guide on Typical Criteria
High	Severe change to views. Removal of valuable landscape features / elements that highly contribute to the overall quality and nature of views; Total change to the visual character of the surrounding landscape. Large number of viewers affected over a prolonged period of time.

	Development is highly prominent in the view.
Medium	Moderate alteration to views. Development affects few visual features/elements on or adjacent to the Application Site. Reversible effect affecting only a part of the wider view. Development 'stands out' in the view.
Low	The Proposed Development would cause a small impact / change and would affect relatively few visual receptors. Change to views on transitory routes such as infrequently used paths and roads. Small change to more complex views for a small number of viewers with no particular focus on The Proposed Development.
Negligible	The Proposed Development is appropriate in its context or barely perceptible. It may be difficult to differentiate from its surroundings and has very little or no impact on receptors compared to the baseline situation. It would have no or minimal effect on visual features / elements on or adjacent to the Application Site.

Nature of Effects

- 11.101 The nature of effects contributes to the assessment of magnitude of landscape and visual effects.
- 11.102 The LVIA considers whether the landscape and visual changes that would arise as a result of The Proposed Development would be beneficial or adverse. An adverse effect is one that introduces a new, discordant or intrusive element to the landscape or a view. A beneficial effect would be from an overall improvement to the landscape or a view through the removal of existing discordant features and replacement with features of similar scale to those in the surrounding landscape or view, or introduction of high quality features within landscape or a view that would contribute to its overall character.
- 11.103 With regard to the duration of landscape and visual effects, short to medium-term effects are normally considered to be temporary and associated with the construction of The Proposed Development, and long-term effects are normally associated with a fully occupied and operational scheme. Permanent effects are those which result in an irreversible change to baseline conditions or will last for the foreseeable future.
- 11.104 The duration of landscape and visual effects is typically categorised as follows.
- Long term – 15 years and beyond;
 - Medium term – 5-15 years;
 - Short term – 0-5 years.
- 11.105 Landscape and visual effects can be direct (effects that are caused by activities which are an integral part of the scheme) or indirect (effects that are due to

activities that are not part of the scheme, e.g. regeneration benefits attributable to the scheme).

Significance of Landscape and Visual Effects

- 11.106 Assessment of landscape and visual effects refers to the change that is predicted to take place to the existing (baseline) condition of the landscape and views as a result of The Proposed Development.
- 11.107 The significance of an effect is broadly determined by assessing the sensitivity to change of the landscape resource and visual receptors against the magnitude of change predicted upon them. The assessment of the effects takes into account mitigation measures implemented as part of The Proposed Development. **Table 11.5 is used as a guide only and the assessment of the significance of landscape and visual effects takes into account other modifying factors based on professional judgement.** Ultimately a combination of sensitivity and magnitude will give effects which may be major, moderate, minor or negligible.

Table 11.5: Significance of the effect on the landscape resource and visual receptors

Magnitude of Effect	Impact Significance		
High	Moderate	Major or Moderate	Major
Medium	Minor or Moderate	Moderate	Major or Moderate
Low	Minor	Minor or Moderate	Moderate
Negligible	Negligible	Negligible	Negligible
	Low	Medium	High
	Receptor Sensitivity		

- 11.108 The following table provides a brief definition of the key landscape and visual significance criteria.

Table 11.6: Significance Criteria

Significance	Description
Major	Important or substantial change in landscapes of national, district or local importance, or substantial changes in views experienced by most sensitive visual receptors.
Moderate	Noteworthy or medium change in landscape and visual conditions.
Minor	Inconsiderable or small change in landscape and visual conditions.
Negligible	No discernible change in landscape and visual conditions. No effect or an effect which is beneath the level of perception, within normal bounds of variation or within the margin of forecasting error.

- 11.109 Major effects are usually deemed significant. Similarly, effect of medium magnitude on a highly sensitive receptor or effect of high magnitude on receptors of medium sensitivity may also be judged 'significant'. The assessment also considers the nature of the landscape and visual effects as described above.

BASELINE CONDITIONS

Introduction

- 11.110 The assessment of effects on townscape, landscape and visual amenity is aided through consideration of a series of viewpoints. The viewpoints have been selected to be representative of the visual sensitivities of the study area and publicly accessible locations in the general vicinity of the Site from which clear views of the development may be obtained.
- 11.111 A Zone of Theoretical Visibility (ZTV) was run to determine areas of key visibility. Listed Buildings and Conservation Areas were also mapped to determine the sensitivity of any proposed receptors where visibility was likely. See Figure 1, rbmp.2328/01/ZTV for information.
- 11.112 The chosen viewpoint locations are shown in Appendix 11.2 rbmp.2328/02/Viewpoints. These are supported by rbmp AVR Verified Views, Appendix 11.3. These views have been agreed with MCC Planning Officers.
- 11.113 The townscape character within the study area is described and assessed below and relevant information concerning heritage assets is shown in Appendix 11.1, rbmp.2328/01/ZTV which illustrates the existing relevant policies and key landscape features within the study area.

Visual Appraisal

- 11.114 The baseline views were recorded on Tuesday 10th August 2023 and 21st September 2023 by Richard Bennett of RBMP Ltd, a chartered landscape architect.
- 11.115 This section looks at the baseline experience for the potentially sensitive receptors and the potential effects on their visual amenity. Visual effects relate to changes that arise in the composition of available views as a result of changes to the landscape, to people's responses to the changes and to the overall effects with respect to visual amenity. Effects upon these receptors are derived through the changes to the views experienced and through this the change to the overall visual amenity of the study area, as brought about by The Proposed Development.
- 11.116 Due to the temporary nature of the construction activity, it will not be considered as part of the appraisal. The townscape impact will be considered in relation to the completed development after the individual viewpoint (baseline) appraisal.

DESCRIPTION OF THE SITE AND SURROUNDING TOWNSCAPE

- 11.117 The Site is located North of Manchester Victoria Station (a key public transport hub), West of Manchester's Green Quarter (a city-centre residential area) and South-East of Strangeways Prison.
- 11.118 The site is bounded by Park Place to the north, Cheetham Hill Road (A665) to the east, Imperial Home & Multi Goods furniture shop to the South, and the former out-patient wing of the Women and Children's Hospital, now derelict office space, to the west.
- 11.119 The site is currently occupied by a single-storey building in the centre of the plot. The building is a disused unit that previously operated as a Jewellery store. It has fallen to disrepair and is overall in poor condition. The building is single storey, with an internal mezzanine level in the roof. The building fills most of the proposed site, with the remaining areas being hard landscaping, with bay parking to Cheetham Hill Road and to Park Place. The area to the West of the building is currently enclosed by a fence.
- 11.120 Cheetham in which the Site sits, is an inner-city ward of Manchester that was heavily urbanised following the Industrial Revolution. Cheetham is dissected by Cheetham Hill Road, which is lined with churches, mosques, synagogues and temples, as well as terraced houses from its history as a textile processing district. The area has always been multi-ethnic, and today, markets along the road trade in home-wares and foods from all over the world
- 11.121 The existing site is occupied by a 760sq.m. detached showroom/ warehouse premises of brick construction beneath a part pitched, part flat roof. There is car parking to Park Place and Cheetham Hill Road, and a hard landscaped yard to the West, with a currently gated access route from Park Place to Park Street.
- 11.122 To the north of the site, across Park Place, is the area of Strangeways which comprises of a mix of industrial, retail, fast food and leisure use within warehouse buildings. Further North along Cheetham Hill Road is the area of Cheetham Hill.
- 11.123 To the east, on the other side of Cheetham Hill Road, is the Park Inn Hotel, located within Green Quarter, a primarily residential area. Beyond this is the railway, with the arches housing a number of commercial and leisure spaces.
- 11.124 To the south, directly adjacent to the site is the Imperial Home & Multi Goods shop. Next along Cheetham Hill Road is the Grade 2 listed former synagogue, currently occupied as an office space. Beyond that is a snooker centre, and on the other side of Trinity Way is the Citipark, AO Arena, and the city centre beyond.
- 11.125 To the west, directly adjacent to the site is the former out-patient wing of the Women and Children's Hospital, that is a currently derelict office space. Beyond this is a small surface car park, and the area of Strangeways which comprises of a mix of industrial, retail, fast food and leisure use within warehouse buildings. Beyond these in the north-west direction is HM Prison Manchester.

- 11.126 The site is surrounded by buildings in the range of 1-3 storeys tall. Adjacent to this, surrounding much of Cheetham Hill Road are residential and commercial properties mostly around 20-25m above ground.
- 11.127 The area lacks a distinctive character, being at the meeting point of various characteristically different districts. As the area undergoes regeneration, it is a mix of single storey industrial buildings to the north and west, and high-density residential buildings to the east with building heights of between 7-21 storeys. South is the city centre.
- 11.128 The area surrounding the site displays a variety of building typologies, materials and styles. The nearby former synagogue is the only listed building in the area and has a classical style. The adjacent Green Quarter residential buildings are contemporary mid-high rise buildings, utilising a mixture of cladding materials with tonal variations to visually break up the massing. The existing historic buildings in the immediate vicinity, including the listed former Synagogue, are dispersed and classical in their appearance. Typically for Manchester, they are constructed from materials including sandstone and red brick.

SENSITIVE RECEPTORS

Introduction

- 11.129 The views agreed with the Local Planning Authority are set out in 'rbmp.2328/02/Viewpoints' Appendix 11.2, and are summarised as:
- Views from Deansgate looking North Towards the Site
 - Views from River Irwell Footpath
 - Views from Cathedral Square and Surrounding Amenity Areas
 - Views from Cheetham Hill Road looking South
 - Views from Road Network South of Site
 - Views from Amenity Space adjacent to Dantzic Street
 - Views from Areas Surrounding Great Ancoats Street looking North-West.

ASSESSMENT OF EFFECTS

Users Deansgate looking North Towards the Site

- 11.130 Represented by Viewpoints VP01, VP02, VP03.
- 11.131 Users of Deansgate travelling north have funnelled views towards the Cathedral and beyond towards the Site. These users are primarily pedestrians moving along the pavements. At the centre point along Deansgate, the proximity and mix of existing buildings adjacent to the road reduce visibility and the visual experience is

particularly local to Deansgate. However, as users approach the northern end of Deansgate, views open-up and the Cathedral becomes the dominant feature.

- 11.132 These receptors have a medium sensitivity to the proposals.

Potential Visual Effects

- 11.133 The AVRs show that the proposals will appear as an addition to the open longer-distance aspect looking south along Deansgate. The proposals will be largely hidden by the established trees along Deansgate. The open aspect will be further diminished by the 1 Lord Street development, once complete, reducing the impact of The Proposed Development, and helping to frame a narrower view north.

- 11.134 These receptors will receive a low level of effect on their visual amenity as a result of the Proposed Development.

User at the corner of Victoria Street & Cathedral Approach

- 11.135 Represented by Viewpoints VP04A and VP04B.

- 11.136 These receptors are pedestrians and vehicle users of the road network around the Cathedral including the recently pedestrianised Victoria Street. Looking north, the AO Arena building dominates the view and is framed by the recently completed Embankment buildings. Looking towards the Cathedral, this is a key position to appreciate the historic building, with its tower in the foreground and the architectural detailing of the tower and nave visible against the skyline.

- 11.137 These receptors have a medium sensitivity to the proposals.

- 11.138 These receptors will receive a low level of effect on their visual amenity as a result of the Proposed Development.

Potential Visual Effects

- 11.139 The AVRs show that the proposed building will become a taller addition to the skyline beyond the AO Arena building. The skyline will be altered, however the massing associated with Former Boddingtons Brewery site, Dutton Street and 1 Lord Street will also be clearly visible and The Proposed Development will become an addition to that.

Users of Cathedral Gardens

- 11.140 Represented by Viewpoints VP17.

- 11.141 At this point, the open space is wide and pedestrianised allowing users to commute between Exchange Square and Victoria Street. The contemporary glass built National Football Museum dominates this part of the townscape and features in the majority of views northwards. Further away the recently completed New Victoria residential buildings rise above Victoria Station and frames views northwards towards the site. The Grade I listed Chetham's Library is partially screened by existing vegetation. Visual receptors will understand that the historic buildings

associated with the Conservation Area are to the south including the Cathedral, and the contemporary/ modern buildings are north-east towards Corporation Street and Great Ancoats Street including the CIS building.

- 11.142 These receptors have a medium sensitivity to the proposals.

Potential Visual Effects

- 11.143 The AVR shows that the top of the proposed building will form an additional element to the skyline above the existing vegetation. Although the gardens are historically significant and designed in such a way to maximise the frontages of Chetham's Library and the Cathedral, Users of this space are already experiencing the glass-built Football Museum building and surrounding New Victoria residential towers. As such the lower-level height and insignificant scale of the proposed building from this viewpoint diminishes the visual effect. It should be noted that the visible massing of The Proposed Development is equal to the Former Boddingtons Brewery site, Dutton Street and 1 Lord Street developments.

- 11.144 These receptors will receive a low level of effect on their visual amenity as a result of The Proposed Development.

Users of River Irwell Footpath

- 11.145 Represented by Viewpoints VP05 and VP06.

- 11.146 Views from the west at this point are funnelled along the River Irwell, with typical features associated with a river-way. As the receptors walk along the route there is a visual break between the newer developments to the South and city centre, and the lower-level traditional industrial units associated with the Cheetham Hill district. The new developments around Salford and the City Centre are clearly visible from all locations.

- 11.147 There is a sense of removal from the surrounding townscape and a connection with the natural environment and historic elements. The local views here are particularly scenic in the context of the surrounding city centre and industrial landscape. The river provides a visual and physical link between Salford and the city centre.

- 11.148 Overall, the receptors in this location have a medium sensitivity to the proposals.

Potential Visual Effects

- 11.149 The wireframe shows that the proposals appear as an addition to the existing skyline. However, the proposals should be read in conjunction with the extensive massing associated with 1 Lord Street, Land bound by Great Ducie Street and the Former Boddingtons Brewery site, Dutton Street developments. Once complete, these will dominate the middle and longer distance views across the skyline and The Proposed Development will be largely hidden.

- 11.150 These receptors will receive a low to negligible level of effect on their visual amenity as a result of The Proposed Development.

Users of Cheetham Hill Road looking South

- 11.151 Represented by Viewpoints VP08, VP09, VP10, VP15.
- 11.152 Travelling south along Cheetham Hill Road, the city centre is a focal point in views and captures the visual character of the city fringe and beyond towards the taller buildings associated with the Great Jackson Street Development Framework. Views from the footpath and road are contained and enclosed by the existing properties, with the built form located at the back of the pavement framing the views. This area is a mix of retained warehouses, historic, modern commercial and new build industrial style buildings.
- 11.153 Receptors along this route have a low sensitivity to the proposals.

Potential Visual Effects

- 11.154 The AVRs show that the proposals will bring the taller buildings currently associated with the city centre into the local experience of users travelling south along Cheetham Hill Road. The Proposed Development will provide a more contained visual corridor along Cheetham Hill Road and on into the city centre. It should be noted that the 1 Lord Street Development, once complete, will alter the massing in a way that diminishes the overall impact of The Proposed Development. The Former Boddingtons Brewery site is also visible. When considering its association with the wider SRF and as regeneration zone takes shape, the taller element of The Proposed Development will help orientate and place-mark the corner, as intended.
- 11.155 These receptors will receive a low level of effect on their visual amenity as a result of The Proposed Development.

Users of Road Network South of Site

- 11.156 Represented by Viewpoints VP11, VP12, VP13.
- 11.157 As the topography drops away significantly to the south, users are typically looking back up at the site. Although the area immediately adjacent to the site is predominantly single and two-storey units, the views over the site are funnelled and screened by the recently constructed, surrounding developments associated with Angel Square and New Victoria. The exception are the traffic islands at the junction with the Ring Road where the amount of hardstanding required for the road network provides a clear view North. The surrounding buildings are a mix of architectural styles.
- 11.158 Along Corporation Street there are now a mix of developments, with the existing New Victoria Development dominating the experience of the user.
- 11.159 Receptors along this route have a medium to low sensitivity to the proposals.

Potential Visual Effects

- 11.160 At VP11, the AVR shows that the proposals will have a dominating appearance on the user. At this location the user is very close to the Site and already experiencing

the busy road junction and taller buildings associated with the Arena, and Radisson Hotel building. Although the view is open, the experience is already particularly contained.

- 11.161 Further away at VPs 12 and 13, the building begins to nestle into the existing urban form or becomes almost hidden. At VP12 the Former Boddingtons Brewery site development, once complete, will completely obscure any views across The Proposed Development. At VP13, only a glimpsed view of the top of the proposed building is possible through the existing massing.
- 11.162 These receptors will receive a low level of effect on their visual amenity as a result of The Proposed Development.

Views from Amenity Space adjacent to Dantzic Street

- 11.163 Represented by Viewpoint VP16.
- 11.164 Users of St Michael's Flags & Angel Meadow Park find views increasingly restricted by the new and under construction adjacent developments. Views are further restricted by the surrounding existing mature tree planting. At the northeastern corner of the park, at the elevated position, the view does open up westwards Cheetham Hill Road and the site. The skyline contains a number of different heights and architectural styles of buildings.
- 11.165 These receptors will receive a low to negligible level of effect on their visual amenity as a result of The Proposed Development.

Potential Visual Effects

- 11.166 There is currently no view of the proposed building due to the intervening existing vegetation. For this reason, there will be no change in the view. It should also be noted that as the Northern Gateway Strategic Regeneration Framework progresses, views such as these from around Dantzic Street will further diminish. The 1 Lord Street development will also be clearly visible.
- 11.167 These receptors will receive no change on their visual amenity as a result of The Proposed Development

Views from areas surrounding Great Ancoats Street looking North-West

- 11.168 Represented by Viewpoint VP14.
- 11.169 The buildings in this location are typically taller residential units, surrounded by cleared sites. From here, views towards the Scheme will be largely screened by existing buildings around Ancoats. As a result, views will typically be slight through gaps in the built form.
- 11.170 These receptors have negligible sensitivity to the proposals.

Potential Visual Effects

- 11.171 The AVR shows that there is no view of The Proposed Development.
- 11.172 These receptors will receive no change on their visual amenity as a result of The Proposed Development.

ADDITIONAL MITIGATION & ENHANCEMENT

- 11.173 It is important to consider the enhancements brought about by The Proposed Building within the context of the wider SRF which has at its core aim to regenerate this area of the city into a high-quality neighbourhood. The building has been designed to enhance the local area. Although there is currently no distinct architectural style for the area to draw on, Hodder + Partners Architects have extracted elements from surrounding historic buildings to provide visual cues that follow into the proposals. The height of the adjacent Green Quarter has been sensitively adopted as a reference for the taller elements abutting Cheetham Hill Road.
- 11.174 The Proposed Building will help to provide continuity with the retained heritage assets, while defining a new high-quality design palette that will eventually inform the wider SRF as development continues.
- 11.175 The ground floor mezzanine level has been designed to maximise the proposed commercial units and provide a large active frontage onto Cheetham Hill Road. This will help to define a key objective of the SRF in that any proposals should provide interest at street level, particularly along key routes. Elongated storey heights at the ground level emphasise this and link in with the existing 2-3 storey surrounding industrial/commercial units.
- 11.176 Views both south along Cheetham Hill Road and longer distance views north from Deansgate have been retained. Locally the building lines have been respected in order not to reduce sight lines across the historic buildings such as the former Synagogue building.
- 11.177 The specified materials and design detailing to the building façades have been carefully selected to help maximise the connection with the local area and break up the monolithic massing, adding visual interest at each floor level. Deep-reveals, voids and recesses have been utilised to emphasise certain aspects of the design. The stepped extrusions, link the taller portion of the building facing Cheetham Hill Road with the Green Quarter and the lower portion facing into the wider, eventual lower level SRF zone.
- 11.178 This is a landmark building, but also importantly this is the start of the overall SRF regeneration and as such is helping to define how best to enhance the area while mitigating against any adverse effects on the local area including the retained heritage assets.

CUMULATIVE EFFECTS

- 11.179 As outlined previously the application site is located adjacent to the currently under construction Former Boddingtons Brewery site, Dutton Street development and in close proximity to the ongoing New Victoria, Angel Square and wider NOMA developments. Further it has been agreed sensible to also assess in relation to the consented 1 Lord Street and Land bound by Great Ducie Street developments. It is considered that cumulatively, these applications will dominate the skyline and the townscape of this area once complete. In scale, height and form they are just as impactful as The Proposed Development.

Potential Construction Impacts

- 11.180 The surrounding area is subject to a number of future developments. Most immediately the completed New Victoria development and the under-construction Former Boddingtons Brewery site, Dutton Street. This townscape is regenerating and there are sites in construction across this area and out beyond the city centre fringe to the north and west into Salford.
- 11.181 This is positive regeneration of the area and as set out within the SRFs. Although the Proposed Development has an impact on the townscape and visual receptors in the area, it is a part of the process to rejuvenate and reinvent this part of Manchester and is specifically mapped out within the SRF. The residents of and visitors to the area are already experiencing ongoing construction works of which this will be an extra component. There will be the obvious impacts from the construction vehicle movements, the redirection of highway footpaths, the potential temporary road closures and the noise from construction, most acutely on those residents and office workers in close proximity to the site. However, when considered within the wider context outlined above, the level of impact is judged to be low.

SUMMARY & RESIDUAL EFFECTS

Table 11.7: Summary of Residual Visual Effects

Receptor	Sensitivity	Viewpoint refs	Magnitude of Effect	Nature of Effect
Users Deansgate looking North Towards the Site	Medium	VP01, VP02, VP03	Low	Indirect minor Permanent adverse
User at the corner of Victoria Street & Cathedral Approach	Medium	VP04A, VP04B	Low	Indirect minor-moderate Permanent adverse
Users of New Cathedral Gardens	Medium	VP17	Low	Indirect minor Permanent adverse
Users of River Irwell Footpath	Medium	VP05, VP06	Low to Negligible	Indirect minor Permanent beneficial
Users of Cheetham Hill Road looking South	Low	VP08, VP09, VP10, VP15	Low	Indirect minor Permanent beneficial
Users of Road Network South of Site	Medium to Low	VP11, VP12, VP13	Low	Indirect minor Permanent adverse

Views from Amenity Space adjacent to Dantzic Street	Low to Negligible	VP16	No Change	No Change
View from Junction of New Bridge Street & Cheetham Hill Road	Low	VP08	No Change	No Change

SUMMARY AND CONCLUSIONS

- 11.182 Due to the existing surrounding developments, the Site has the appearance of derelict piece of land and does not contribute positively to the character of the area currently. As a whole, the area is undergoing significant regeneration.
- 11.183 Retained heritage assets adjacent to the site sit as a juxtaposition to the new built form but there is a unison which forms some of the character of this area. Continued development and regeneration is proposed for the areas surrounding the site.
- 11.184 The development of this site is appropriate, suitable and utilises a vacant site. As the SRF notes, the location of the Site (Plot 60) creates an opportunity to positively contribute to the townscape in this location, creating a tall, landmark building which helps to place-mark the wider, surrounding future development.

Visual Amenity

- 11.185 Potentially sensitive visual receptors were reviewed, and representative views were collated across an agreed study area. AVRs were produced from all locations, and these are appended in Volume 2.
- 11.186 Most of the receptors are road and pedestrian users of the highways, and public open spaces in the area. These latter receptors are considered to be more sensitive, but it is judged that the development of the proposals will at most have a low adverse impact on their visual amenity but largely the change will be negligible. This is due to the ongoing regeneration and development of the area as outlined above, the dense grid like pattern of the existing built form restricting views.

Overall Summary

- 11.187 It is considered that there is an opportunity to positively develop this site in townscape character terms with little adverse impact upon the potentially sensitive visual receptors in the area.

12. WIND MICROCLIMATE

INTRODUCTION

- 12.1 This chapter assesses the effects of the Proposed Development on Wind Microclimate in relation to pedestrian comfort and safety. In particular, it considers the potential wind microclimate effects and likely effects of the proposed development on the following:
- Undesirable wind speeds at ground and raised levels of the site, surrounding buildings and nearby areas of public realm during the construction phase; and
 - Undesirable wind speeds at ground and raised levels of the site, surrounding buildings and nearby areas of the public realm during the operational phase.
- 12.2 The chapter describes the methods used to assess the likely significant effects, the baseline conditions currently existing at the site and surroundings, the potential direct and indirect effects of the development arising from unsuitable or strong winds, the mitigation measures required to prevent, reduce, or offset the identified significant effects and the residual effects.
- 12.3 This chapter was written by Dr Jon Winchester of GIA. Jon holds a BSc in Mathematics, MSc in Mechanical Engineering and PhD in Mechanical Engineering. Jon has 11 years of experience of wind analysis for the built environment, developing methods for pedestrian comfort analysis, wind loading and natural ventilation. Jon is the Wind Technical Director of GIA.
- 12.4 Jon has been lead wind consultant on numerous large scale and high profile developments across the UK, with experience in multiple London boroughs, Manchester, Salford, Leeds, Liverpool, Birmingham, Bristol and Glasgow. Jon has written over 25 wind microclimate Environmental Statement chapters.

RELEVANT LEGISLATION & GUIDANCE

- 12.5 The assessment was performed using the London Docklands Development Corporation (LDDC) variant of the Lawson Comfort Criteria. The Lawson Criteria are well-established in the UK for quantifying wind conditions in relation to build developments and, although not a UK 'standard', the criteria are recognised by local authorities as a suitable benchmark for wind assessments. The LDDC variant is established as the most practically applicable variant of the Lawson criteria and is used industry wide. The Lawson Criteria (LDDC variant) have been adopted for this assessment.
- 12.6 The assessment will have due regard to the provisions of the following policy and guidance.

National Planning Policy

Revised National Planning Policy Framework 2021

12.7 The National Planning Policy Framework (NPPF) was revised in July 2021 by the Department of Communities and Local Government (DCLG). The relevant paragraphs are as follows:

12.8 Paragraph 130 of the National Planning Policy Framework states that:

“Planning policies and decisions should ensure that developments:

- create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.”
- There is no specific planning policy guidance dealing with microclimate in terms of pedestrian comfort set out in the revised NPPF.

The National Planning Practice Guidance (NPPG) 2021

12.9 The NPPG identifies the potential for tall and large buildings to affect the wind microclimate. The National Design Guide (2021) states in Paragraph 71 that: “Proposals for tall buildings (and other buildings with a significantly larger scale or bulk than their surroundings) require special consideration. This includes their [...] environmental impacts, such as [...] wind. These need to be resolved satisfactorily”

Local Planning Policy

Manchester Core Strategy (2012 – 2027)

12.10 **Policy EN2 – Tall Buildings** – States that, by their very size, tall buildings can have a significant impact on the local environment and its micro-climate. It is therefore expected that this impact be modelled and that submissions for tall buildings also include appropriate measures to create an attractive, pedestrian friendly local environment.

ASSESSMENT METHODOLOGY & SIGNIFICANCE CRITERIA

CFD Testing

12.11 Wind microclimate conditions have been established using a 3D model, extending 400m radius from the Site, tested using high resolution Computational Fluid Dynamics (CFD).

12.12 CFD is a digital modelling technique, which simulates the effect of wind for the built environment. The air is divided into hundreds of millions of “cells”, within which the equations of motion are solved.

12.13 A suitable atmospheric boundary layer (to accurately capture the effect of local buildings and terrain on atmospheric wind speeds and turbulence) was generated.

- 12.14 A 3D model of the Proposed Development was included in the CFD model and wind speeds were measured on and around the site to determine the strength and frequency of pedestrian level wind speeds.
- 12.15 Wind speeds on and around the site were measured at 1.5m above any surfaces expected to be used for pedestrian activity, to determine the conditions at and around the site. The model was run at full scale from 18 wind angles, spaced using 10° or 30° increments such that no sector contributes more than 10% of the annual wind.
- 12.16 The wind microclimate effects are assessed annually and seasonally. The windiest season (typically the winter months of December, January and February) are reported as this is when the strongest winds are expected, summer conditions (June, July, August) are reported as this is the season when pedestrian usage of outdoor spaces is expected to be highest.

Meteorological Conditions

- 12.17 On-site and local wind speeds measured through the CFD modelling were combined with 30 years-worth of weather data for Manchester International Airport, corrected for terrain local to the airport and the application site, to obtain annual and seasonal frequency and magnitude of wind speeds across the model. This allows the 'grading' of the pedestrian level winds according to the Lawson Comfort Criteria, which are explained later in this section of the chapter.
- 12.18 Correction factors have been applied to take into account the different extended surroundings of the application site relative to the airport, and their influence on the wind conditions. Land surrounding airports is typically flat and open, to minimize wind turbulence for aircraft. The local atmospheric boundary layer of the wind will be different to that at the application site.
- 12.19 The correction factors between the airport (measured 10m above ground) and the application site (at a reference height of 120m) are shown in **Table 12.1**.
- 12.20 These correction factors help to translate wind conditions measured at the airport, to the application site. It should be noted that the terrain analysis has been performed using sectors of 30°.

Table 12.1 Wind Correction Factors

0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°	300°
1.47	1.45	1.45	1.42	1.34	1.30	1.30	1.30	1.32	1.30	1.43	1.41

Lawson Comfort Criteria

- 12.21 Effects were assessed through comparison of measured wind conditions against the Lawson Comfort Criteria.

- 12.22 The Lawson Criteria is recognised guidance used universally across the UK to assess the impact of the proposed development on wind flows in public spaces. Lawson devised a scale for assessing the suitability of wind conditions in the urban environment based upon threshold values of wind speed and frequency of occurrence. This guidance will be used to inform the assessment. The commonly used London Docklands Development Corporation (LDDC) method of the Lawson Criteria is set out in **Table 12.2** and **Table 12.3** below.

Table 12.2 Lawson Comfort Criteria (LDDC variant)

Comfort Category	Mean Wind Speed (5% exceedance)	Description
Sitting	4m/s	Acceptable for outdoor sitting use (e.g. cafes, benches, balconies)
Standing	6m/s	Acceptable for main building entrances, pick-up / drop-off points and bus stops
Walking (leisure)	8m/s	Acceptable for strolling
Walking (business)	10m/s	Acceptable for external pavements, walking purposefully without lingering
Uncomfortable	>10m/s	Not comfortable for regular pedestrian access

Table 12.3 Lawson Safety Criteria (LDDC Variant)

Safety Category	Mean Wind Speed (2hrs/year exceedance)	Description
No Safety Exceedance	<15m/s	No significant risk of strong winds for any users.
S15 (distress)	>15m/s	Unsafe for frail individuals, or cyclists
S20 (safety)	>20m/s	Wind conditions considered unsafe for all users

Target Wind Conditions

- 12.23 Thoroughfares and roadways are targeted to be suitable for walking in winter (the windiest season).

- 12.24 The areas immediately outside any building entrances should be suitable for standing use during the windiest season to provide a “buffer” between the still conditions in interior spaces and the general thoroughfare.
- 12.25 Bus stops are targeted to be suitable for standing, as pedestrians would be expected to dwell in these spaces for a longer duration than a general thoroughfare.
- 12.26 Amenity areas are targeted to be suitable for a mixture of standing and sitting in summer conditions.

Strong Winds

- 12.27 Any areas which are classified as either in the distress category or the safety category (in accordance with **Table 12.3**) will be classified as subject to strong winds and will pose an unacceptable risk to pedestrian safety.

Test Scenarios

- 12.28 The following scenarios were tested as part of the assessment:
- Scenario 1: Baseline for site and surrounds;
 - Scenario 2: Proposed development in baseline surrounds; and
 - Scenario 3: Proposed development in cumulative surrounds.
- 12.29 Trees and soft landscaping were not included in any of the above scenarios, to ensure that worst case conditions were captured.

Characterisation of Effect

- 12.30 Any adverse effects (for strong winds and comfort) are categorised as significant, as these will require mitigation in order to achieve suitable comfort and safety conditions. Any beneficial effects for strong winds will be categorised as significant, as this will reduce the overall wind safety risk for the area. Any negligible (for strong winds and comfort) or beneficial effects (for comfort) will have suitable conditions for the intended use without mitigation, so are not classed as significant.

Significance Criteria

- 12.31 Beneficial effects are those where conditions are calmer than required for the intended use. Adverse effects are those where conditions are windier than required for the intended use, or there is a risk to safety due to strong winds. The scale of wind effects is defined as set out below:
- Major Beneficial: wind conditions are three categories calmer than required;
 - Moderate Beneficial: wind conditions are two categories calmer than required;

- Minor Beneficial: wind conditions are one category calmer than required;
- Negligible / No Effect: wind conditions are those required;
- Minor Adverse: wind conditions are one category windier than required;
- Moderate Adverse: wind conditions are two categories windier than required; and
- Major Adverse: wind conditions are three categories windier than required.

12.32 Additionally, any risk to pedestrian safety due to strong winds is classified as a Major Adverse effect.

12.33 All wind effects will be either site or local effects. For the purposes of this study, a site effect is classified as one which is measured within the site red line boundary, a local effect is one which is measured elsewhere in the study area (the study area being the area shown in Figure 12.2, consisting of 195,000 sqm centred on the site).

12.34 All effects for the completed and operational Proposed Development will be permanent effects, any effects during construction will be temporary effects. All wind effects are direct effects resulting from the impact of the Proposed Development on the local wind environment.

Assumptions / Limitations

12.35 The accuracy of the results is dependent upon the accuracy of the architectural CAD used to construct the model.

12.36 There is an inherent assumption that on-site wind speeds will scale linearly with the measured wind speeds at the airports.

12.37 It is assumed that, during the construction process, wind conditions will gradually change from the Baseline Conditions to the conditions for the Completed Proposed Development.

12.38 It is assumed that on-site activity during construction will be able to withstand a higher category of pedestrian comfort level than for the Completed Proposed Development.

BASELINE CONDITIONS

12.39 A CFD scenario (Scenario 1) consisting of the existing site within existing surrounds was tested to establish baseline conditions.

12.40 **Figure 12.1** shows winter comfort for Scenario 1. **Figure 12.2** shows summer comfort for Scenario 1. **Figure 12.3** shows strong winds for Scenario 1.

Pedestrian Comfort

- 12.41 General thoroughfares and roadways range between suitable for sitting, standing and leisure walking in winter and for sitting and standing in summer. This is suitable for the intended use.
- 12.42 The principal off-site entrances (marked O in results figures) range between suitable for sitting or standing in all seasons. This is suitable for the intended use.
- 12.43 The Park Place bus stops on Cheetham Hill Road (marked B in results figures) are suitable for standing in winter and sitting or standing in summer. This is suitable for the intended use.
- 12.44 The New Century Park amenity space is suitable for a mixture of sitting and standing in summer. This is suitable for the intended use.

Strong Winds

- 12.45 There are no regions of strong winds (exceeding 15m/s for more than 0.025% annually) within the study area for the baseline scenario.

Figure 12.1 Winter Comfort at Ground Level for Scenario 1 (Existing Site with Existing Surrounds)

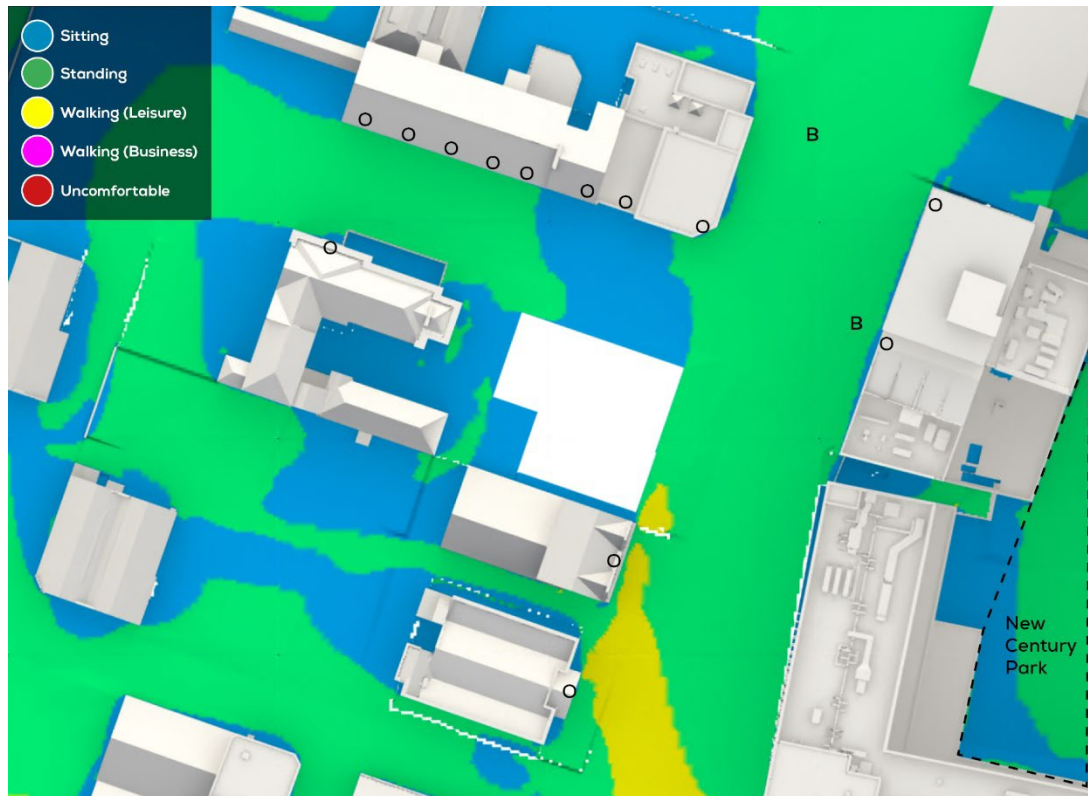
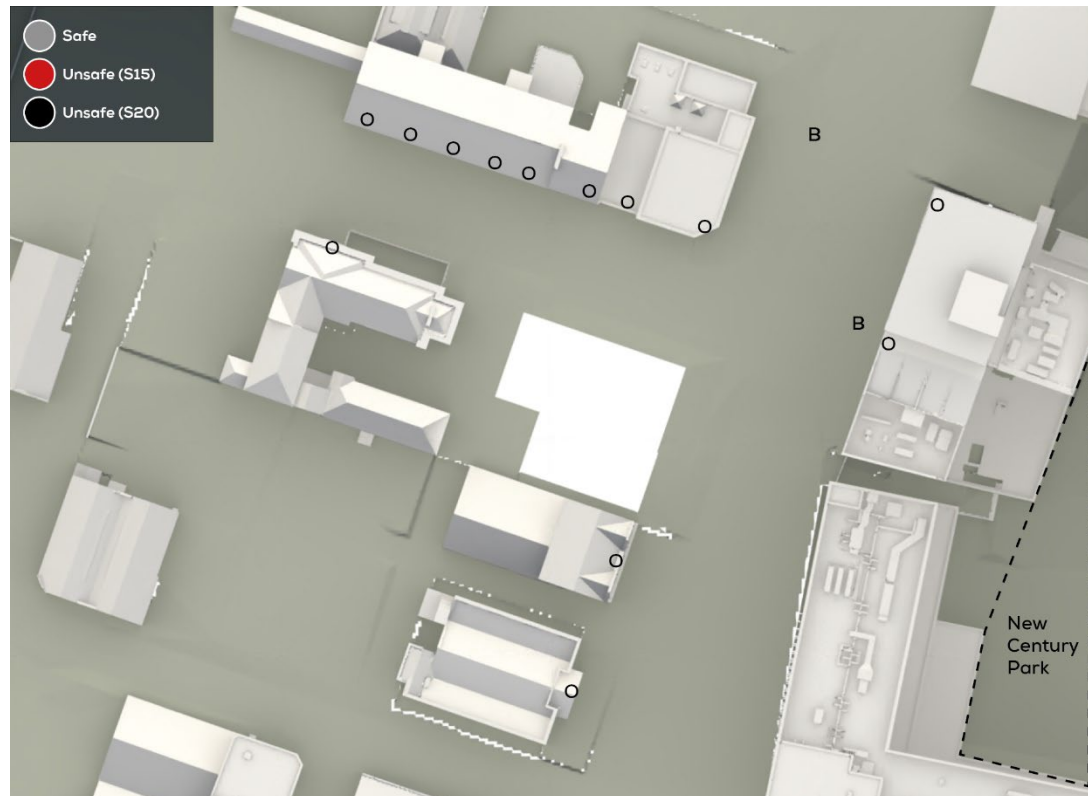


Figure 12.2 Summer Comfort at Ground Level for Scenario 1 (Existing Site with Existing Surrounds)



Figure 12.3 Strong Winds at Ground Level for Scenario 1 (Existing Site with Existing Surrounds)



SENSITIVE RECEPTORS

12.46 The following existing sensitive receptors have been identified:

- Local throughfares and roadways, targeted to be suitable for walking in winter;
- Off-site entrances, targeted to be suitable for standing in winter;
- The northbound and southbound Park Place bus stops on Cheetham Hill Road, targeted to be suitable for standing in winter; and
- New Century Park amenity space, targeted to be suitable for a mix of sitting and standing in summer.

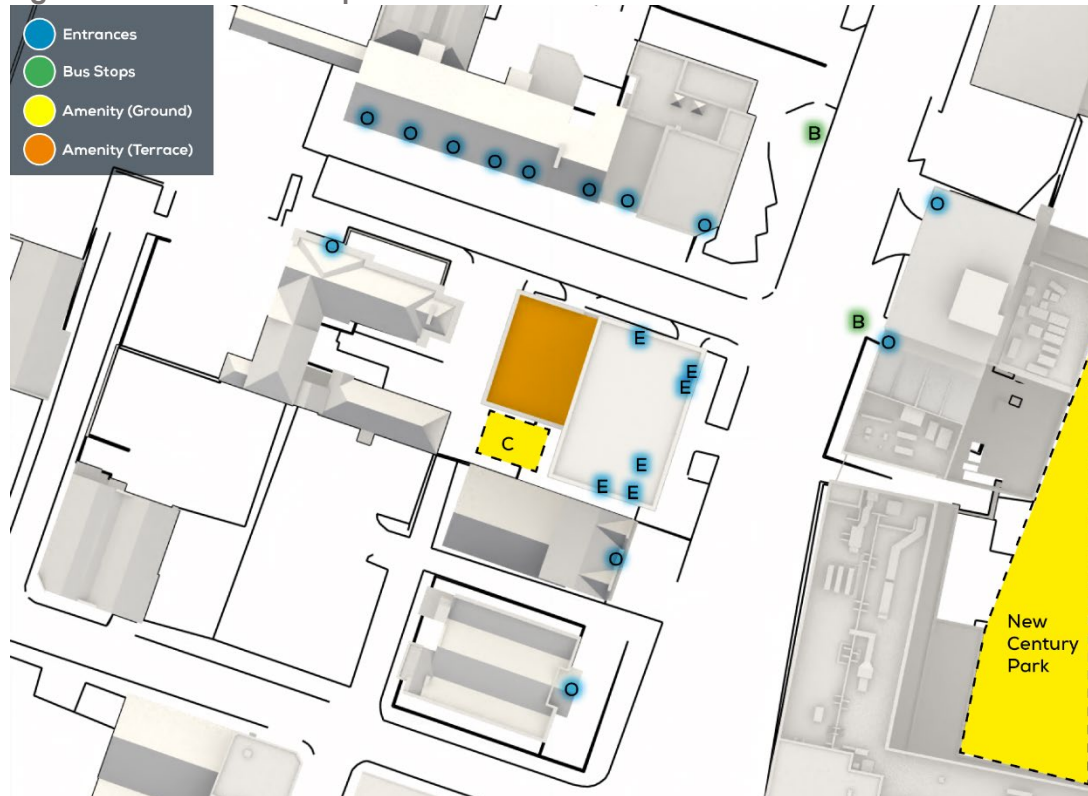
12.47 The following proposed sensitive receptors have been identified:

- Entrances to the proposed development, targeted to be suitable for standing in winter;
- The semi-private ground floor courtyard amenity space, targeted to be suitable for a mix of sitting and standing in summer.
- A private terrace at level 15, targeted to be suitable for a mix of sitting and standing in summer.

- Balconies on the northern elevation at levels 2 to 14, targeted to be suitable for sitting or standing in summer.

12.48 The locations of the sensitive receptors are shown in **Figure 12.4**.

Figure 12.4 Sensitive Receptors



ASSESSMENT OF EFFECTS

Demolition and Construction

- 12.49 During construction, conditions will gradually change from the baseline conditions to conditions for the completed and operational development. Therefore, construction effects can be inferred from the effects due to the completed and operational development.
- 12.50 As all wind effect for the completed and operational development are negligible, all demolition and construction wind effects will also be **Negligible (not significant)**.

The Completed and Operational Development

- 12.51 A CFD scenario (Scenario 2) consisting of the proposed development within existing surrounds was tested to establish operational wind effects.

- 12.52 **Figure 12.5** shows winter comfort at ground level for Scenario 2. **Figure 12.6** shows summer comfort at ground level for Scenario 2. **Figure 12.7** shows strong winds at ground level for Scenario 2.
- 12.53 **Figure 12.8** shows winter comfort at elevated levels for Scenario 2. **Figure 12.9** shows summer comfort at elevated levels for Scenario 2. **Figure 12.10** shows strong winds at elevated levels for Scenario 2.

Pedestrian Comfort

- 12.54 General thoroughfares and roadways would range between suitable for sitting, standing and leisure walking (with a highly localised region suitable for business walking in the service access area to the west of the site) in winter and for sitting and standing in summer. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.55 The principal entrances to the proposed development (marked E in results figures) would be suitable for sitting or standing in all seasons. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.56 The entrance to 4 Park Place (marked O and circled in **Figure 12.5**) is adjacent to a region which is suitable for walking in winter. There are, however, existing steps to this entrance which would break up the wind in this region and make conditions suitable for standing (and therefore suitable for the intended use). All other principal off-site entrances (marked O in results figures) would range between suitable for sitting or standing in all seasons. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.57 The Park Place bus stops on Cheetham Hill Road (marked B in results figures) would be suitable for standing in all seasons. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.58 The proposed semi-private courtyard (marked C in results figures) would be suitable for a mix of sitting and standing in all seasons, with the majority suitable for sitting in summer. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.59 The proposed level 15 terrace would be suitable for a mix of sitting and standing in all seasons, with the majority suitable for sitting in summer. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.60 The proposed balconies would be suitable for sitting in all seasons. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.61 The New Century Park amenity space would be suitable for a mixture of sitting and standing in summer. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).

Strong Winds

- 12.62 There are no regions of strong winds (exceeding 15m/s for more than 0.025% annually) within the study area for the baseline scenario. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).

Figure 12.5 Winter Comfort at Ground Level for Scenario 2 (Proposed Development with Existing Surrounds)



Figure 12.6 Summer Comfort at Ground Level for Scenario 2 (Proposed Development with Existing Surrounds)



Figure 12.7 Strong Winds at Ground Level for Scenario 2 (Proposed Development with Existing Surrounds)



Figure 12.8 Winter Comfort at Elevated Level for Scenario 2 (Proposed Development with Existing Surrounds)

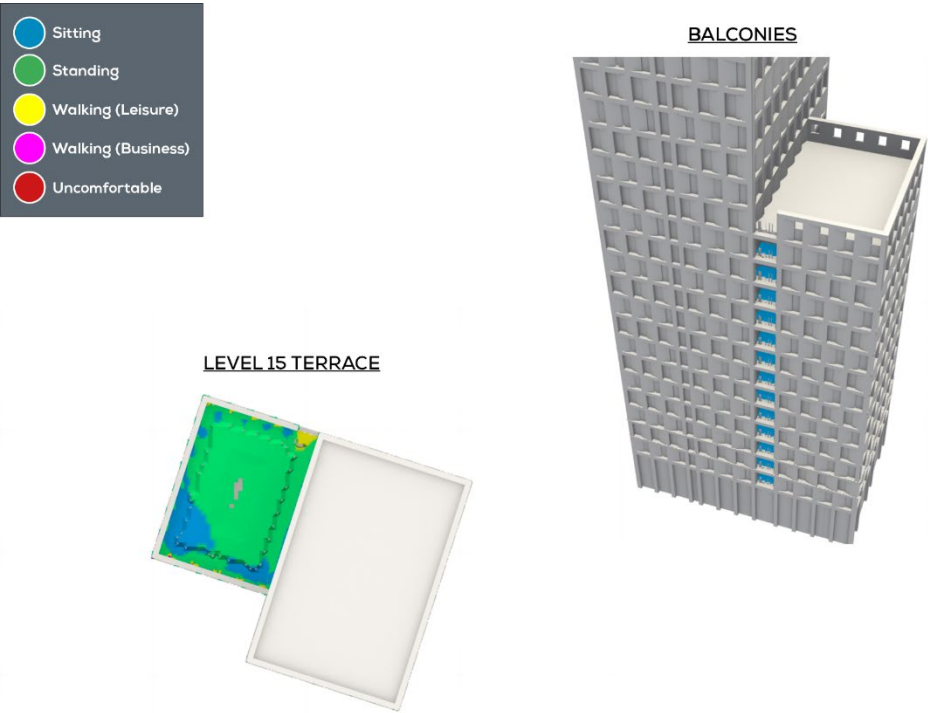


Figure 12.9 Summer Comfort at Elevated Level for Scenario 2 (Proposed Development with Existing Surrounds)

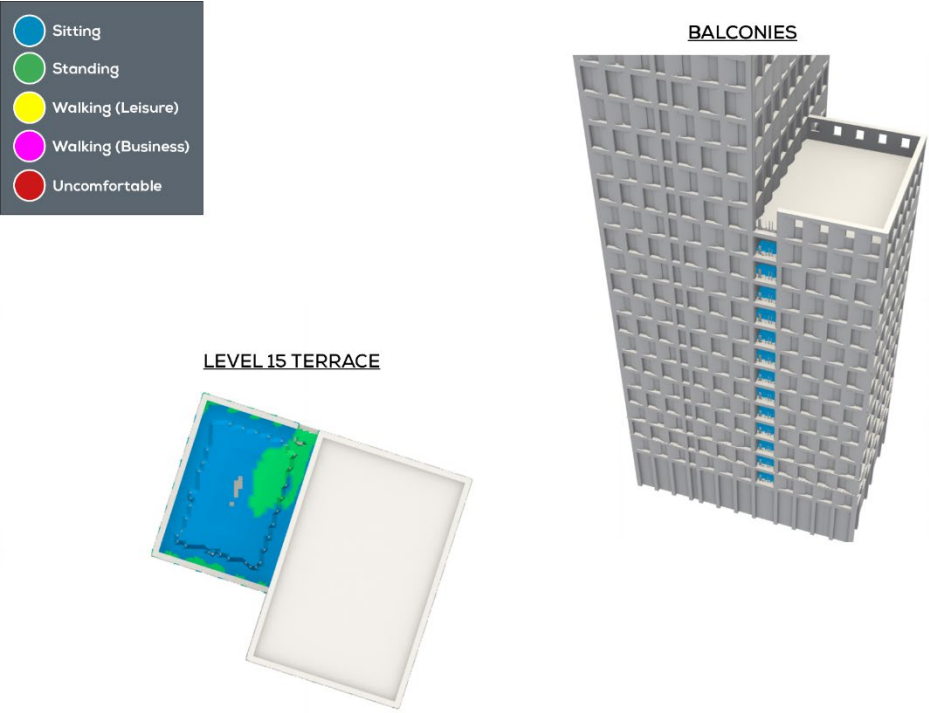


Figure 12.10 Strong Winds at Elevated Level for Scenario 2 (Proposed Development with Existing Surrounds)



ADDITIONAL MITIGATION & ENHANCEMENT

Demolition and Construction

- 12.63 No additional wind mitigation/enhancement measures are required.

The Completed and Operational Development

- 12.64 No additional wind mitigation/enhancement measures are required.

CUMULATIVE EFFECTS

Approach

- 12.65 An additional CFD scenario as tested to ascertain the impact of local cumulative schemes.
- 12.66 The following scheme was considered sufficiently advanced to be included within the baseline surrounds:
- New Victoria, Residential Phase (128667/JO/2020); and
 - Former Boddingtons Brewery site, Dutton Street (118831/FO/2018)
- 12.67 The following schemes were only included as part of the cumulative surrounds:
- 1 Lord Street (113914/FO/2016);
 - New Victoria, Office (134092/FO/2022); and
 - Land bound by Great Ducie Street (132416/FO/2021).

Likely Cumulative Wind Effects and Their Significance

- 12.68 A CFD scenario (Scenario 3) consisting of the proposed development within cumulative surrounds was tested to establish cumulative wind effects.
- 12.69 **Figure 12.11** shows winter comfort at ground level for Scenario 3. **Figure 12.12** shows summer comfort at ground level for Scenario 3. **Figure 12.13** shows strong winds at ground level for Scenario 3.
- 12.70 **Figure 12.14** shows winter comfort at elevated levels for Scenario 3. **Figure 12.15** shows summer comfort at elevated levels for Scenario 3. **Figure 12.16** shows strong winds at elevated levels for Scenario 3.

Pedestrian Comfort

- 12.71 General thoroughfares and roadways would range between suitable for sitting, standing and leisure walking (with a highly localised region suitable for business walking in the service access area to the west of the site) in winter and for sitting and standing in summer. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.72 The principal entrances to the proposed development (marked E in results figures) would be suitable for sitting or standing in all seasons. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.73 The entrance to 4 Park Place (marked O and circled in **Figure 12.5**) is adjacent to a region which is suitable for walking in winter. There are, however, existing steps to this entrance which would break up the wind in this region and make conditions suitable for standing (and therefore suitable for the intended use). All other principal off-site entrances (marked O in results figures) would range between suitable for sitting or standing in all seasons. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.74 The Park Place bus stops on Cheetham Hill Road (marked B in results figures) would be suitable for standing in all seasons. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.75 The proposed semi-private courtyard (marked C in results figures) would be suitable for a mix of sitting and standing in all seasons, with the majority suitable for sitting in summer. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.76 The proposed level 15 terrace would be suitable for a mix of sitting and standing in all seasons, with the majority suitable for sitting in summer. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.77 The proposed balconies would be suitable for sitting in all seasons. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).
- 12.78 The New Century Park amenity space would be suitable for a mixture of sitting and standing in summer. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).

Strong Winds

- 12.79 There are no regions of strong winds (exceeding 15m/s for more than 0.025% annually) within the study area for the baseline scenario. This is suitable for the intended use and is a **Negligible** wind effect (**not significant**).

Figure 12.11 Winter Comfort at Ground Level for Scenario 3 (Proposed Development with Cumulative Surrounds)



Figure 12.12 Summer Comfort at Ground Level for Scenario 3 (Proposed Development with Cumulative Surrounds)

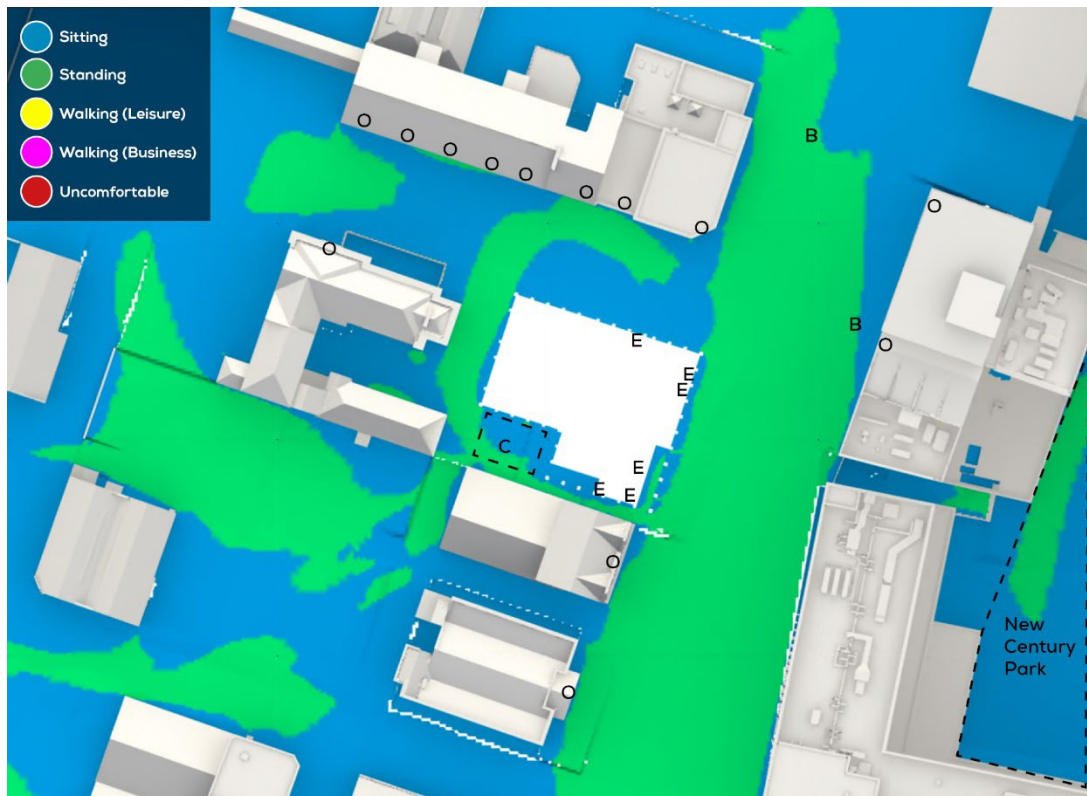


Figure 12.13 Strong Winds at Ground Level for Scenario 3 (Proposed Development with Cumulative Surrounds)



Figure 12.14 Winter Comfort at Elevated Level for Scenario 3 (Proposed Development with Cumulative Surrounds)

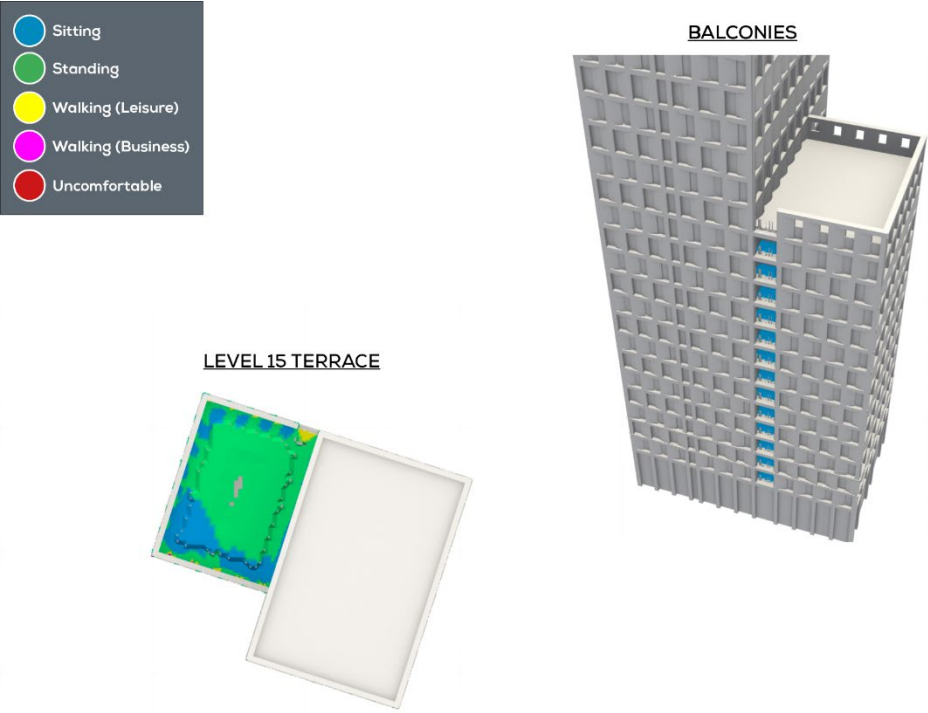


Figure 12.15 Summer Comfort at Elevated Level for Scenario 3 (Proposed Development with Cumulative Surrounds)

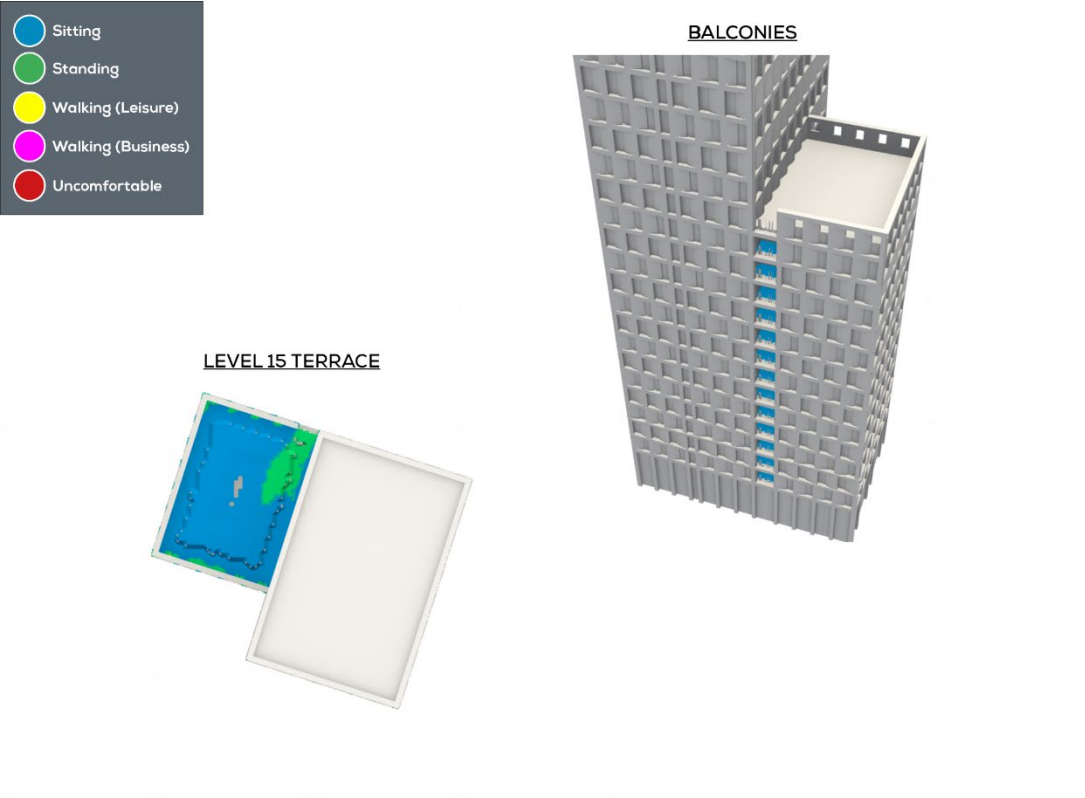
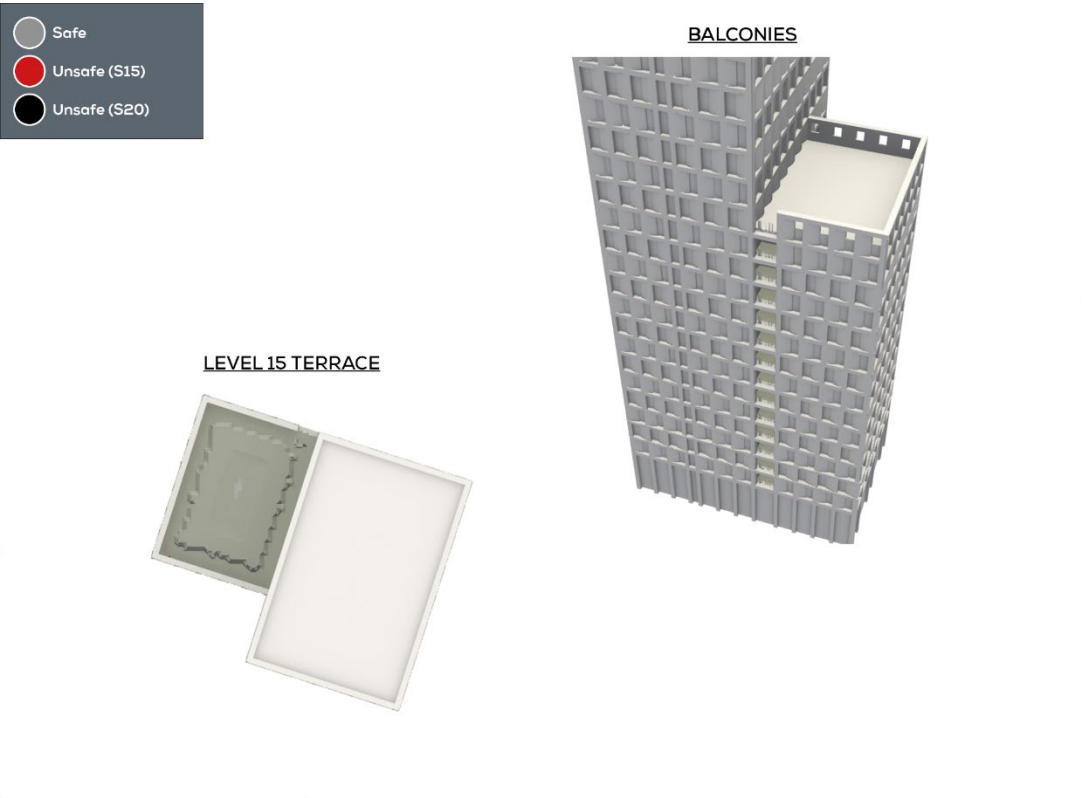


Figure 12.16 Strong Winds at Elevated Level for Scenario 3 (Proposed Development with Cumulative Surrounds)



SUMMARY & RESIDUAL EFFECTS

- 12.80 A Computational Fluid Dynamics (CFD) based wind assessment was performed of the Proposed Development with both existing and cumulative surrounds.
- 12.81 No wind safety risks due to strong winds were identified, and wind conditions were suitable for all thoroughfares, roadways, bus stops, proposed entrances, off-site entrances, proposed ground level amenity, proposed terrace level amenity, proposed balconies, and existing amenity spaces.
- 12.82 All wind effects are negligible (not significant).

Table 12.4 Residual Effects Summary

Description of Effect	Embedded Mitigation	Potential Effect	Additional Mitigation	Residual Effect
Construction				
Thoroughfares & Roadways	N/A	Negligible (not significant)	N/A	Negligible (not significant)
Bus stops	N/A	Negligible (not significant)	N/A	Negligible (not significant)
Off-site entrances	N/A	Negligible (not significant)	N/A	Negligible (not significant)
Existing amenity spaces	N/A	Negligible (not significant)	N/A	Negligible (not significant)
Strong winds	N/A	Negligible (not significant)	N/A	Negligible (not significant)
Operation				
Thoroughfares & Roadways	N/A	Negligible (not significant)	N/A	Negligible (not significant)
Bus stops	N/A	Negligible (not significant)	N/A	Negligible (not significant)

On-site entrances	N/A	Negligible (not significant)	N/A	Negligible (not significant)
Off-site entrances	N/A	Negligible (not significant)	N/A	Negligible (not significant)
Proposed ground floor amenity spaces	N/A	Negligible (not significant)	N/A	Negligible (not significant)
Proposed terrace level amenity spaces	N/A	Negligible (not significant)	N/A	Negligible (not significant)
Proposed Balconies	N/A	Negligible (not significant)	N/A	Negligible (not significant)
Existing amenity spaces	N/A	Negligible (not significant)	N/A	Negligible (not significant)
Strong winds	N/A	Negligible (not significant)	N/A	Negligible (not significant)

REFERENCES

12.83 This ES Chapter has been prepared by reference to the following:

- Manchester City Council (2012). Manchester Core Strategy (2012 – 2027). See: http://www.manchester.gov.uk/downloads/download/4964/core_strategy_development_plan
- National Planning Policy Framework (2021). See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf
- National Design Guide (2021). See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962113/National_design_guide.pdf

13. SUMMARY OF IMPACTS

- 13.1 The Environmental Statement (ES) has reported on the results of the Environmental Impact Assessment of the Proposed Development. In total, six technical disciplines have been considered, with a range of potential impacts arising from both construction and operation of the Proposed Development.

SUMMARY OF RESIDUAL IMPACTS

- 13.2 This section collates the impacts upon receptors that have been identified in each of the technical chapters of this ES.
- 13.3 Mitigation measures have been incorporated into the Proposed Development to minimise adverse residual effects as is set out in each topic chapter.
- 13.4 The majority of operational and construction effects identified can be appropriately mitigated or compensated and reduced to a level which is not considered to be significant. The only exception is the effect of the Proposed Development's Greenhouse Gas Emissions on the global atmosphere is minor adverse during construction and minor-moderate adverse during operation.
- 13.5 The following table summarises the residual effects resulting from the Proposed Development.

Table 13.1: Summary of Impacts

Daylight and Sunlight			
Receptor	Mitigation	Residual Impact - Daylight Amenity	Residual Impact - Sunlight Amenity
Operational Phase			
Jefferson Place	n/a	Negligible	Negligible
Park Inn, 2 Cheetham Hill Road	n/a	Minor Adverse	Negligible
Hallmark Tower	n/a	Minor Adverse	Negligible
Cypress Place	n/a	Minor Adverse	Negligible
Barton Place	n/a	Negligible	Negligible
Number One Lord Steet	n/a	Negligible	Negligible
4 Park Place	n/a	Minor Adverse	Minor Adverse

Greenhouse Gas Emissions			
Receptor	Effect	Mitigation Proposed	Residual Impact
Construction Phase			
The global atmosphere	Embodied carbon	Review embodied carbon associated with the proposed	Minor adverse

	associated with the product and construction process stage (lifecycle stages A1-A5).	development and put in place a commitment to reduce lifecycle embodied carbon compared to the business as usual baseline. The business as usual baseline is defined as the design of the building using current standard best practice construction materials and techniques. An appropriate baseline should be defined for the project, taking into consideration industry benchmarks, such as those set by LETI and RIBA. Review opportunities to minimise internal finishes such as dry lining, ceilings and decorative floor screeds / covering where not technically required (e.g. for acoustics or fire protection), opting for fair faced finishes instead. A whole life carbon assessment should be undertaken for each building to identify opportunities to reduce embodied carbon through design, material specification and construction processes. Implement a Travel Plan for site staff	
Operational Phase			
The global atmosphere	Embodied carbon associated with the in-use stage for the proposed development (lifecycle stages B1-B5, B6 and B7).	Review embodied carbon associated with the proposed development and put in place a commitment to reduce lifecycle embodied carbon compared to the business as usual baseline. The business as usual baseline is defined as the design of the building using current standard best practice construction materials and techniques. An appropriate baseline should be defined for the project, taking into consideration industry benchmarks, such as those set by LETI and RIBA. A whole life carbon assessment should be undertaken for each	Minor-moderate adverse

		building to identify opportunities to reduce embodied carbon through design, material specification and construction processes. Consideration should be given for embodied carbon associated with the maintenance and replacement cycle. Explore the use of passive design measures in order to reduce the need for heating. Where any electrical equipment (e.g., oven, white goods etc.) is being installed by the house builder, identify unregulated energy loads and demonstrate reduction through specifying energy efficient equipment Specify the use of water meters to measure water consumption. Explore the feasibility of specifying rainwater harvesting in order to reduce potable water consumption. Specify landscaping that does not require irrigation in order to reduce unregulated water consumption It is not possible to influence and mitigate emissions arising from delivery and servicing vehicles from external companies.	
--	--	---	--

Built Heritage		
Receptor	Mitigation Proposed	Residual Impact
Construction Phase		
Chethams Hospital and Attached Wall	n/a	Negligible Neutral
Victoria Station Including Concourse to rear with Restaurant and Booking Hall	n/a	Negligible Neutral
The Tower of HMP Manchester	n/a	Negligible Neutral
Stephenson Bridge	n/a	Negligible Neutral
Gatehouse of HMP Manchester	n/a	Negligible Neutral
City Buildings	n/a	Negligible Neutral

Cooperative Wholesale Society Building to North of Junction with Hanover Street	n/a	Negligible Neutral
Cooperative Wholesale Society	n/a	Negligible Neutral
Cheetham Town Hall (Former)	n/a	Negligible Neutral
New Century House, including its attached Conference Hall and Abstract Concrete Relief Wall in the Entrance Piazza	n/a	Negligible Neutral
Co-Operative Insurance Society (Cis) Building	n/a	Negligible Neutral
Parkers Hotel	n/a	Negligible Neutral
Knowsley Hotel	n/a	Negligible Neutral
Cheetham Town Hall Annexe (Former)	n/a	Negligible Neutral
Former Free Library	n/a	Negligible Neutral
Former Boys Prison Block of HMP Manchester	n/a	Negligible Neutral
Main Prison Block of HMP Manchester	n/a	Negligible Neutral
South East Wing to Chetham's Hospital (Former Manchester Grammar School)	n/a	Negligible Neutral
St Chad's Cheetham Hill First World War Memorial Cross	n/a	Negligible Neutral
Roman Catholic Church of St Chad and Attached Presbytery, and Boundary Walls	n/a	Negligible Neutral
Detached Block of Schoolroom Approximately 20 Metres South of Chethams Hospital	n/a	Negligible Neutral
Former Synagogue	Construction methodology and programme	Minor Adverse
Charter Street Mission (formerly Charter Street Ragged School and Working Girls' Home)	n/a	Negligible Neutral
Cathedral Church of St Mary	Construction methodology and programme	Negligible Adverse
Cathedral Conservation Area	n/a	Negligible Neutral
Shudehill Conservation Area	n/a	Negligible Neutral

21 Cheetham Hill Road	Construction methodology and programme	Minor-Moderate Adverse
3 Park Place	Construction methodology and programme	Minor-Moderate Adverse
6-12 Park Place	Construction methodology and programme	Minor-Moderate Adverse
Operational Phase		
Chethams Hospital and Attached Wall	n/a	Minor Neutral
Victoria Station Including Concourse to rear with Restaurant and Booking Hall	n/a	Negligible Neutral
The Tower of HMP Manchester	n/a	Minor Neutral
Stephenson Bridge	n/a	Negligible Neutral
Gatehouse of HMP Manchester	n/a	Minor Neutral
City Buildings	n/a	Negligible Neutral
Cooperative Wholesale Society Building to North of Junction with Hanover Street	n/a	Negligible Neutral
Cooperative Wholesale Society	n/a	Negligible Neutral
Cheetham Town Hall (Former)	n/a	Minor Neutral
New Century House, including its attached Conference Hall and Abstract Concrete Relief Wall in the Entrance Piazza	n/a	Negligible Neutral
Co-Operative Insurance Society (Cis) Building	n/a	Negligible Neutral
Parkers Hotel	n/a	Negligible Neutral
Knowsley Hotel	n/a	Minor Neutral
Cheetham Town Hall Annexe (Former)	n/a	Minor Neutral
Former Free Library	n/a	Minor Neutral
Former Boys Prison Block of HMP Manchester	n/a	Minor Neutral
Main Prison Block of HMP Manchester	n/a	Minor Neutral
South East Wing to Chetham's Hospital (Former Manchester Grammar School)	n/a	Minor Neutral

St Chad's Cheetham Hill First World War Memorial Cross	n/a	Negligible Neutral
Roman Catholic Church of St Chad and Attached Presbytery, and Boundary Walls	n/a	Minor Neutral
Detached Block of Schoolroom Approximately 20 Metres South of Chethams Hospital	n/a	Minor Neutral
Former Synagogue	Public benefits including activation of local streetscape and pedestrian environment in setting of heritage asset	Minor Adverse
Charter Street Mission (formerly Charter Street Ragged School and Working Girls' Home)	n/a	Negligible Neutral
Cathedral Church of St Mary	High quality design including light materiality and lower shoulder block, reducing overall visual impact	Minor Adverse
Cathedral Conservation Area	n/a	Minor Neutral
Shudehill Conservation Area	n/a	Negligible Neutral
21 Cheetham Hill Road	n/a	Minor Adverse
3 Park Place	n/a	Minor Adverse
6-12 Park Place	n/a	Negligible-Minor Adverse

Socio-Economics			
Receptor	Effect	Mitigation Proposed	Residual Impact
Construction Phase			
Regional Workforce		n/a	Minor Beneficial, Temporary (not significant)
Operational Phase			
Local businesses	Increase in residential population could	n/a	Moderate beneficial, permanent (significant) at local level

	lead to additional local spending		Minor beneficial, permanent (not significant) at other scales
Local employment	Generation of 20 net additional jobs once complete and operational.	n/a	Minor beneficial, permanent
Local and borough residents	Up to 154 residential units	n/a	Moderate beneficial, permanent (significant)
Local and borough residents	Up to 31 new affordable units	n/a	Moderate beneficial, permanent (significant)
Local children & young people	Primary school places	n/a	Negligible
Local children & young people	Secondary school places	n/a	Negligible
Local residents	Primary healthcare	n/a	Negligible
Local residents	Open Space	n/a	Negligible
Local children & young people	Play areas	n/a	Negligible

Townscape and Visual Impact Assessment			
Receptor	Magnitude of Effect	Mitigation Proposed	Residual Impact
Operation			
Users Deansgate looking North Towards the Site	Low	n/a	Indirect minor Permanent adverse
User at the corner of Victoria Street & Cathedral Approach	Low	n/a	Indirect minor-moderate Permanent adverse
Users of New Cathedral Gardens	Low	n/a	Indirect minor Permanent adverse
Users of River Irwell Footpath	Low to Negligible	n/a	Indirect minor Permanent beneficial
Users of Cheetham Hill Road looking South	Low	n/a	Indirect minor Permanent beneficial

Users of Road Network South of Site	Low	n/a	Indirect minor Permanent adverse
Views from Amenity Space adjacent to Dantzic Street	No Change	n/a	No Change
View from Junction of New Bridge Street & Cheetham Hill Road	No Change	n/a	No Change

Wind Microclimate			
Receptor	Effect	Mitigation	Residual Impact
Construction Phase			
Thoroughfares & Roadways	Negligible	n/a	Negligible
Bus stops	Negligible	n/a	Negligible
Off-site entrances	Negligible	n/a	Negligible
Existing amenity spaces	Negligible	n/a	Negligible
Strong winds	Negligible	n/a	Negligible
Operational Phase			
Thoroughfares & Roadways	Negligible	n/a	Negligible
Bus stops	Negligible	n/a	Negligible
On-site entrances	Negligible	n/a	Negligible
Off-site entrances	Negligible	n/a	Negligible
Proposed ground floor amenity spaces	Negligible	n/a	Negligible
Proposed terrace level amenity spaces	Negligible	n/a	Negligible
Proposed Balconies	Negligible	n/a	Negligible
Existing amenity spaces	Negligible	n/a	Negligible
Strong winds	Negligible	n/a	Negligible

CUMULATIVE AND INTERACTICE EFFECTS

- 13.6 The purpose of this section is to draw together the findings from the individual topic chapters and to consider the inter-relationships between these assessments and any other developments in the area surrounding the site. It also establishes whether

there are any other residual effects on the identified sensitive receptors, which may require additional mitigation not previously identified.

13.7 This chapter considers two types of effects in associated with the Proposed Development:

- Cumulative: these arise from the combined effect of the Proposed Development with committed development schemes that, individually, may be insignificant, but when combined with other impacts, may be significant. This includes consideration of the impacts during the construction and operational phases; and
- Interactive: the combined effect of different types of impacts arising from the Proposed Development on a particular receptor. An example of this could include the combined impact of noise and air quality effects on a residential dwelling. This also includes consideration of the impacts during the construction and operational phases.

CUMULATIVE EFFECTS

13.8 The list of cumulative sites were agreed with the Council through the Scoping Opinion. This list is set out again in Table 13.1 and a map is provided at Appendix 6.2.

Table 13.1: Agreed Cumulative Sites

Name	Application ref.	Description	Status and programme
1 Lord Street	113914/FO/2016	Erection of a 16 storey building to form 192 residential apartments (Use Class C3a) together with ground floor commercial unit (172 sqm) (Use Class A1, A2, A3 or B1) with associated vehicular access from Fernie Street, car parking and hard and soft landscaping following demolition of existing buildings	Approved 17.11.2016 Numerous condition discharges. MCC confirmed implementation
New Victoria, Corporation Street	134092/FO/2022	Erection of a 10 storey office building (Use Class E) plus basement, a ground floor commercial unit (Use Class E), with associated external amenity in the form of roof terraces, plant, substation, cycle parking, hard and soft landscaping, access and servicing and other associated works	Approved 20.10.2022 Office phase to complete Q4 2025
	128667/JO/2020	Variation of condition 2 (specified plans) attached to	Approved 19.03.2021

		previously approved planning application 111777/FO/2016/C1 to allow for changes to the approved plans to include formation of a new enclosed amenity use bridge link between the two approved residential buildings at upper ground floor level only, together with roof top amenity space/terrace on top of new bridge link	Residential phase under construction and close to completion
	111777/FO/2016/C	Erection of two residential buildings of a maximum 21 and 26 storeys to accommodate 520 apartments (178 x 1 bed, 286 x 2 bed and 56 x 3 bed apartments) (Use Class C3). Erection of one office building of maximum eight storeys comprising up to 11,647 sq. m (GIA) of office accommodation. Ground floor commercial space (Use Class A1, A2, A3 and B1), lower ground level car parking, access and servicing arrangements, alterations to Corporation Street, new public realm and other associated works.	Approved 29.09.2016
Land bound by Great Ducie Street	132416/FO/2021	Erection of two buildings part 27, 20, 17 storeys and part 11 and 10 storeys to form a mixed use development comprising of 461 residential apartments (Use Class C3a) and ground floor commercial uses (Use Class E) (718 sqm) together with public realm including courtyard pocket park, landscaping, car parking and other associated works	Approved 30.06.2022 Construction has not yet commenced
Former Boddingtons Brewery Site, Dutton Street	118831/FO/2018	Erection of two buildings (a part 17, part 12 storey building and a part 26, part 23 storey building) to form 556 residential units (Use Class C3a) together with the creation of 3490 sqm of commercial floor space (Use Classes A1, A2, A3, B1 and D1) with associated landscaping, access and other associated works	Approved 28.02.2019 Permission implemented and construction phase began May 2023

- 13.9 An assessment of potential cumulative effects arising from the Proposed Development in combination with the developments identified above has been considered within each topic chapter and is summarised below.
- 13.10 In order to summarise the respective cumulative impacts, we have utilised professional judgement to interpret the findings of each technical chapter and assigned impacts according to the following significance criteria:
- Non anticipated – no cumulative impacts identified.
 - Negligible – Potential for cumulative impact identified of negligible significance to identified receptors.
 - Minor – Potential for cumulative impact identified of minor significance to identified receptors.
 - Moderate – Potential for cumulative impact identified of moderate significance to identified receptors.
 - Major – Potential for cumulative impact identified of major significance to identified receptors.
- 13.11 Table 13.2 provides a summary of all cumulative impacts identified.

Table 13.2: Inter-Project Cumulative Effects

	Cumulative Impacts	
	Construction Phase	Operational Phase
Daylight and Sunlight	Negligible No cumulative effects anticipated	Negligible No cumulative effects anticipated
Greenhouse Gas Emissions	Negligible No cumulative effects anticipated – although cumulative effects are considered to be significant, quantification of GHG emissions is scoped out.	Negligible No cumulative effects anticipated – although cumulative effects are considered to be significant, quantification of GHG emissions is scoped out.
Built Heritage	Heritage assets – Negligible The cumulative developments were considered holistically in the assessment. The residual effects during construction does not reduce or increase in the context of these developments.	Heritage assets – Minor The cumulative developments were considered holistically in the assessment. Minor adverse impact on the Grade I listed Cathedral Church of St Mary is judged to derive from the impact of development at 1 Lord Street in conjunction with the Proposed Development

Townscape and Visual Impact Assessment	Sensitive Receptors – Negligible The cumulative developments were considered holistically in the assessment. The level of impact during construction is considered low.	Sensitive Receptors - Minor The cumulative developments were considered holistically in the assessment. The level of impact during construction ranges between no change to indirect minor-moderate adverse with most impacts being minor.
Socio-Economics	Construction Employment – Minor The combined effects of the developments are likely to have a minor beneficial (not significant), long term cumulative effect on construction employment due to the potential for the committed developments to generate a considerable amount of construction employment (in addition to the proposed development).	Employment Market – Moderate There will be an overall permanent moderate beneficial, long-term cumulative effect on employment in the North-West. Housing Market – Moderate There will be an overall permanent moderate beneficial (significant) long term cumulative effect on housing in the North West.
Wind Microclimate	Negligible No cumulative impacts anticipated	Negligible No cumulative impacts anticipated

- 13.12 The above table summarises the cumulative effects of the Proposed Development when considered alongside relevant commitments and pending applications within the locality. Allowing for mitigation, the predicated impacts range from Negligible to Minor Adverse, and for positive effects, Moderate Beneficial.

INTERACTIVE EFFECTS

- 13.13 This section considers the inter-relationship between the direct effects arising from the Proposed Development. It takes account of the main residual effects following mitigation as identified in the technical chapters of this ES, which could be expected to arise during the construction and operational phases of the Proposed Development.
- 13.14 The objective is to identify where the accumulation of effects on particular receptors, and the relationship between those effects, may give rise to a need for additional mitigation not identified previously.
- 13.15 For example, a local resident might be affected by the noise from the construction phase, but might also be affected by dust, vibration and increased traffic. Individually, these might not be assessed as being significant, but in combination they might become significant.
- 13.16 This section focuses only on those issues where the effect identified is of minor, moderate or major significance (i.e. where the effect is negligible or there is no effect, it has not been considered).

- 13.17 The table below summarises the receptors that are identified in the technical chapters, which may be subject to an accumulation of environmental impacts.

Table 13.3: Interactive Effects for Receptors

Receptor	Construction Phase		Operational Phase	
	Discipline	Impact	Discipline	Impact
Park Inn, 2 Cheetham Hill Road			DS	Negligible/Minor Adverse
Hallmark Tower			DS	Negligible/Minor Adverse
Cypress Place			DS	Negligible/Minor Adverse
4 Park Place			DS	Minor Adverse
The global atmosphere	GHG	Minor Adverse	GHG	Minor-Moderate Adverse
Chethams Hospital and Attached Wall			H	Minor Neutral
The Tower of HMP Manchester			H	Minor Neutral
Gatehouse of HMP Manchester			H	Minor Neutral
Cheetham Town Hall (Former)			H	Minor Neutral
Knowsley Hotel			H	Minor Neutral
Cheetham Town Hall Annexe (Former)			H	Minor Neutral
Former Free Library			H	Minor Neutral
Former Boys Prison Block of HMP Manchester			H	Minor Neutral
Main Prison Block of HMP Manchester			H	Minor Neutral
South East Wing to Chetham's Hospital (Former Manchester Grammar School)			H	Minor Neutral
Roman Catholic Church of St Chad and Attached Presbytery, and Boundary Walls			H	Minor Neutral
Detached Block of Schoolroom Approximately 20 Metres South of Chethams Hospital			H	Minor Neutral
Former Synagogue	H	Minor Adverse	H	Minor Adverse
Cathedral Church of St Mary			H	Minor Adverse
Cathedral Conservation Area			H	Minor Adverse

21 Cheetham Hill Road	H	Minor-Moderate Adverse	H	Minor Adverse
3 Park Place	H	Minor-Moderate Adverse	H	Minor Adverse
6-12 Park Place	H	Minor-Moderate Adverse	H	Negligible-Minor Adverse
Regional Workforce	SE	Minor Beneficial		
Local businesses			SE	Minor-Moderate Beneficial
Local employment			SE	Minor Beneficial
Local and borough residents			SE	Moderate beneficial
Users Deansgate looking North Towards the Site			TVIA	Indirect minor adverse
User at the corner of Victoria Street & Cathedral Approach			TVIA	Indirect minor-moderate adverse
Users of New Cathedral Gardens			TVIA	Indirect minor adverse
Users of River Irwell Footpath			TVIA	Indirect minor beneficial
Users of Cheetham Hill Road looking South			TVIA	Indirect minor beneficial
Users of Road Network South of Site			TVIA	Indirect minor adverse

SUMMARY

- 13.18 Overall, the analysis above has identified that there is no requirement to identify additional mitigation measures to address effects arising from the interrelationship between impacts on identified receptors.
- 13.19 In this case, it is not considered that in-combination effects are significantly greater than individually assessed impacts and that therefore no additional mitigation is required.